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**ANTIGENICS INC.**

AR 2003 | NASDAQ: AGEN

CANCER | INFECTIOUS DISEASES | AUTOIMMUNE DISORDERS

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**UNITED STATES SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**Form 10-K**

- ☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)**  
**OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the fiscal year ended December 31, 2003
- or
- ☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)**  
**OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number: 000-29089

**Antigenics Inc.**

(exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of  
incorporation or organization)

**06-1562417**

(I.R.S. Employer  
Identification No.)

**630 Fifth Avenue, Suite 2100, New York, New York 10111**

(Address of principal executive offices including zip code)

**Registrant's telephone number, including area code:**

**(212) 994-8200**

**Securities registered pursuant to Section 12(b) of the Act:**

**None**

(Title of each Class)

**None**

(Name of each exchange on which registered)

**Securities registered pursuant to Section 12(g) of the Act:**

**Common Stock, \$.01 Par Value**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act). Yes ☒ No ☐

The aggregate market value of voting stock held by non-affiliates of the registrant as of June 30, 2003 was: \$195,703,989. There were 45,061,865 shares of the registrant's Common Stock outstanding as of March 8, 2004.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the definitive proxy statement for the registrant's 2004 Annual Meeting of Shareholders to be held on May 26, 2004, which definitive proxy statement will be filed with the Securities and Exchange Commission not later than 120 days after the registrant's fiscal year of December 31, 2003, are incorporated by reference into Part III of this Annual Report on Form 10-K.

This Annual Report on Form 10-K contains forward-looking statements, including statements regarding the broad applicability and commercial potential of our heat shock product candidates, our ability to develop new compounds that are more efficacious and less toxic than conventional therapies, that we will successfully develop a "next generation" Onchophage that relies on much smaller tumor tissue samples, that a personalized vaccination approach to cancer is required to generate a more robust and targeted immune response, that our heat shock protein technology can be applied without a personalized vaccination approach to diseases that are not highly variable among patients, the timing of commencing final analysis of data from our C-100-12 clinical trial, the plans for and timing of clinical trials, the safety and efficacy of our product candidates, our future research and development activities, estimates of the potential markets for our products, estimates of the capacity of manufacturing and other facilities to support our products, our expected future revenues, operations and expenditures, and projected cash needs. These statements are subject to risks and uncertainties that could cause our actual results to differ materially from those that are projected in these forward-looking statements. These risks and uncertainties include, among others:

- our ability to successfully complete pre-clinical and clinical development of our product candidates, which includes enrolling sufficient patients in our clinical trials and demonstrating the safety and efficacy of our product candidates in such trials;
- our ability to manufacture sufficient amounts of our products for clinical trials and commercialization activities;
- our ability to obtain, maintain and successfully enforce adequate patent and other proprietary rights protection of our products;
- the content and timing of submissions to and decisions made by the FDA and other regulatory agencies, including demonstrating to the satisfaction of the FDA the safety and efficacy of our product candidates;
- our ability to develop a sales and marketing staff and the success of their selling efforts;
- the accuracy of our estimates of the size and characteristics of the markets to be addressed by our products;
- our ability to obtain reimbursement for our products from third-party payers, and the extent of such coverage; and
- our ability to raise additional funds in the capital markets, through arrangements with corporate partners, or from other sources.

We have included more detailed descriptions of these risks and uncertainties and other risks and uncertainties applicable to our business under "Factors That May Impact Future Results" in Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations of this Form 10-K. We encourage you to read those descriptions carefully. We caution investors not to place significant reliance on forward-looking statements contained in this document; such statements need to be evaluated in light of all the information contained in the document. Furthermore, the statements speak only as of the date of this document, and we undertake no obligation to update or revise these statements.

## PART I

### Item 1. *Business*

#### **Our Business**

##### *Overview*

We are a biotechnology firm developing products to treat cancers, infectious diseases and autoimmune disorders. Our most advanced product candidate is Oncophage®, a personalized cancer vaccine being tested in several types of cancer, including in Phase III clinical trials for the treatment of renal cell carcinoma (the most common type of kidney cancer) and for metastatic melanoma. Our product candidate portfolio also includes (1) AG-858, a personalized cancer vaccine in a Phase II clinical trial for the treatment of chronic myelogenous leukemia, (2) AG-702/AG-707, a therapeutic vaccine program in Phase I clinical development for the treatment of genital herpes, and (3) Aroplatin™, a liposomal chemotherapeutic. Our related business activities include research and development, regulatory and clinical affairs, business development, and administrative functions that support these activities.

#### **Our Products Under Development**

##### *Introduction*

Heat shock proteins, our founding technology platform, form the basis for our most advanced product candidate, Oncophage, and for our AG-858 and AG-702/AG-707 product candidates. We have observed clinical activity in multiple human clinical trials using our heat shock protein product candidates, including data demonstrating complete and partial clinical responses in a portion of patients with measurable metastatic disease in several types of cancer. Additionally, in a portion of patients who were rendered disease-free by surgery, we have observed signs of clinical activity in four different types of cancer. In our studies to date, no significant product related toxicity has been observed. We believe that these human data further support the broad applicability and corresponding commercial potential of our heat shock protein candidates.

Oncophage is a personalized therapeutic cancer vaccine that is based on a heat shock protein called gp96 and it is currently in Phase III clinical trials for renal cell carcinoma and metastatic melanoma. Oncophage has received Fast Track designation and Orphan Drug designation from the US Food and Drug Administration, or FDA, for both renal cell carcinoma and for metastatic melanoma.

AG-858 is a personalized therapeutic cancer vaccine based on a different heat shock protein called HSP70, which is being tested in combination with Gleevec™ (imatinib mesylate, Novartis) in a Phase II clinical trial for the treatment of chronic myelogenous leukemia, a cancer of the blood system in which too many white blood cells are produced in the bone marrow.

AG-702/AG-707 is our therapeutic vaccine program for the treatment of genital herpes. While AG-702 consists of a recombinant heat shock protein (HSP70) attached to a single peptide, or protein fragment, of herpes simplex virus-2, AG-707 is a multivalent vaccine (a type of vaccine that addresses multiple targets) that contains 49 herpes simplex virus-2 peptides. We initiated a proof-of principle Phase I trial for AG-702 in the fourth quarter of 2001 and plan to initiate a Phase I clinical trial of AG-707 in 2004.

Our other product candidates and clinical programs include Aroplatin, a novel liposomal third-generation platinum chemotherapeutic that has been evaluated in clinical trials for colorectal cancer and other solid tumors. Platinum chemotherapeutics are cancer drugs containing the metallic element platinum, which has been shown to have some anti-cancer effects. In the case of Aroplatin, the active platinum drug component is encapsulated in a liposome, which is a spherical particle of a lipid or fatty substance. Our technologies also

include QS-21, an adjuvant, or companion compound, studied in both therapeutic and prophylactic vaccines to improve the quality of immune response.

Through our preclinical research programs, we intend to develop additional novel compounds to treat cancer and infectious diseases that are designed to be more efficacious and safer than conventional therapies. Our lead preclinical program is focused on a "next-generation" Oncophage vaccine, which incorporates several important innovations. With these advances, we expect to be able to manufacture sufficient quantities of a personalized cancer vaccine from much smaller tumor tissue samples. We are also studying pathways through which heat shock proteins activate the immune system as well as combinations of Oncophage and other compounds.

### *Heat Shock Protein Technology*

Heat shock proteins, or HSPs, are also called stress proteins. HSPs are a group of proteins that are induced when a cell undergoes various types of environmental stresses like heat, cold and oxygen deprivation. HSPs are present in all cells in all life forms from bacteria to mammals, and their structure and function are similar across these diverse life forms. Under normal conditions, heat shock proteins play a major role in transporting fragments of proteins called peptides, including antigenic peptides, within a cell, and are thus called "chaperones." Antigens or antigenic peptides are molecules that stimulate an immune response. Because HSPs chaperone peptides, HSPs bind to the broad array of antigens, or antigenic "fingerprint" of the cell in which they reside.

Although heat shock proteins are normally found inside cells, they also serve an important purpose when found extracellularly, or outside of cells. When they are found outside of cells, it indicates that a cell has undergone necrosis, a type of rupturing cell death caused by disease, mutation, or injury whereby a cell's contents are spilled into the body tissue. Extracellular HSPs are a powerful "danger signal" to the immune system and they therefore are capable of generating a targeted immune response against the infection or disease responsible for the necrotic cell death.

Combined, the intracellular and extracellular functions of heat shock proteins form the key to our technology. The "chaperoning" nature of heat shock proteins allows us to produce vaccines containing all the antigenic peptides of a given disease. In the case of cancer, the vaccines are personalized, consisting of heat shock proteins purified from a patient's tumor cells which remain bound, or complexed, to the broad array of peptides produced by that patient's tumor. These heat shock protein-peptide complexes, or HSPPCs, when injected into the skin, have the ability to stimulate a powerful T-cell-based immune response capable of targeting and killing the cancer cells from which these complexes were derived. Because cancer is a highly variable disease from one patient to another, we believe that a personalized vaccination approach is required to generate a more robust and targeted immune response.

For diseases that are not highly variable from one patient to another, such as genital herpes, we do not believe that a personalized vaccination approach is required. For example, in our AG-702/AG-707 program for the treatment of genital herpes, we complex, or bind, one or several defined antigenic herpes peptides to a recombinantly produced heat shock protein (HSP70) creating an HSPPC. This recombinantly produced HSPPC, when injected into the skin, elicits a T-cell-based immune response to the synthetic peptides carried by the heat shock protein. These purified complexed HSPs form the platform on which our Oncophage, AG-858 and AG-702/AG-707 product candidate programs are based.

### ***Product Development Portfolio***

Below is a list of the clinical status of our lead product candidates under development.

<b>Product</b>	<b>Status</b>		
	<b>Phase III</b>	<b>Phase II</b>	<b>Phase I</b>
Oncophage .....	Renal cell carcinoma Melanoma	Colorectal cancer(1) Non-Hodgkin's lymphoma(1) Gastric cancer(1)	Pancreatic cancer(1)
AG-858 .....		Chronic myelogenous leukemia	
AG-702 .....			Genital herpes
Aroplatin .....		Colorectal cancer(2)	

(1) These trials are closed to enrollment.

(2) We do not intend to initiate new clinical trials of Aroplatin until we complete our review of this program.

### **Oncophage**

#### ***Introduction***

Oncophage, our most advanced product candidate, is a personalized therapeutic cancer vaccine that is based on heat shock protein gp96 and is currently in Phase III clinical trials for the treatment of renal cell carcinoma and metastatic melanoma. Each Oncophage vaccine is made from a patient's tumor tissue. After a surgeon removes a patient's tumor, a portion of that tumor tissue is frozen and shipped overnight to our manufacturing facility in Massachusetts. In our current Phase III trials, we generally require at least seven grams of tumor tissue to yield a sufficient amount of Oncophage for a typical course of treatment.

Using a proprietary manufacturing process that takes approximately eight to ten hours per individual patient lot, we isolate the heat shock protein peptide complexes, or HSPPCs, from the tumor tissue. Through this isolation process, the HSPPCs are extracted and purified from the tumor tissue, then formulated in sterile saline solution and packaged in standard single injection vials. After the performance of stringent quality control testing, including sterility testing, we ship Oncophage frozen back to the hospital pharmacy for administration after a patient has fully recovered from surgery, which is usually four to six weeks later. A medical professional administers Oncophage by injecting the product into the skin weekly for four weeks and every other week thereafter until that patient's supply of Oncophage is depleted.

Although we believe that our technology is applicable to all cancer types, our initial focus with Oncophage is on cancers that have poor or no available treatment options and that typically yield larger quantities of tumor tissue from the surgical procedure.

We filed an investigational new drug application, or IND, for Oncophage in November 1996 that the FDA allowed on December 20, 1996. We started enrolling patients in our first clinical trial at Memorial Sloan-Kettering Cancer Center in New York, New York in November 1997. To date, we have treated over 700 cancer patients with Oncophage in our clinical trials.

We believe that the collective results from these clinical trials show that Oncophage has a favorable safety profile. We also believe that these results demonstrate that treatment with Oncophage can generate immunological and anti-tumor responses and in some cases may prolong survival.

## **Oncophage Clinical Programs**

### ***Renal Cell Carcinoma***

*Background.* Renal cell carcinoma is the most common type of kidney cancer. The American Cancer Society estimates that kidney cancer will affect roughly 35,000 people in the United States in 2004, and about 12,000 people will die from the disease. Renal cell carcinoma accounts for about 85 percent of all kidney tumors. By the time renal cell carcinoma is diagnosed in these patients, about one-third of them will have developed metastatic disease.

The current standard of care for patients with non-metastatic renal cell carcinoma consists of a nephrectomy, or surgical removal of the kidney, followed by observation. For patients with metastatic disease, the only FDA approved treatment is intravenous high-dose interleukin-2, a human cytokine, which is a hormone-like protein that facilitates communication between cells of the immune system. The response rate, which includes partial responses and complete responses, of patients who are treated with high-dose interleukin-2 is approximately 15 percent. Treatment with high-dose interleukin-2 often causes severe adverse side effects. These side effects often can lead to discontinuation of treatment. Although not FDA-approved for the treatment of renal cell carcinoma, a lower-dose of interleukin-2 injected subcutaneously, or underneath the skin, either alone or in combination with other cytokines, has become a treatment option. This treatment regimen has been the subject of a number of studies with widely varying outcomes, none of which have demonstrated any survival benefit. At the present time, there is no FDA approved treatment for non-metastatic renal cell carcinoma.

*Clinical Trials.* In a Phase I/II trial conducted at M.D. Anderson Cancer Center, in Houston, Texas, we enrolled patients with measurable metastatic renal cell carcinoma. Of the 38 treated patients, one patient had a complete response and two patients had a partial response. Another seven patients showed stabilization of their disease. The reported median time to progression was 2.9 months and the reported median survival was 1.3 years from date of surgery. No serious adverse events were associated with treatment with Oncophage.

A Phase II trial for patients with metastatic renal cell carcinoma was initiated at M.D. Anderson Cancer Center in March 1999. Findings from this trial were presented at the 39th annual meeting of the American Society of Clinical Oncology, or ASCO, in June 2003. In this trial patients were treated with Oncophage until progression and IL-2 after progression. No significant toxicity was observed to be associated with Oncophage treatment.

Oncophage received Fast Track designation for the treatment of renal cell carcinoma from the FDA in October 2001. Oncophage is the first personalized cancer vaccine to receive Fast Track designation. Oncophage also received Orphan Drug status in renal cell carcinoma from the FDA in May 2002.

We initiated a Phase III, multicenter, international trial for non-metastatic renal cell carcinoma identified as Study C-100-12 in 2000 into which the first patient was randomized in February 2001. In November 2003, the FDA lifted the partial clinical hold that it had placed on our Phase III trials for Oncophage due to concerns related to the product characterization of Oncophage. After reviewing the additional Oncophage product characterization information that we submitted, the FDA lifted the partial clinical hold approximately 13 weeks after it had imposed the hold. In late December 2003, we announced the result of a planned interim analysis of the data from this trial. Based on its review of the safety data, efficacy data and other information regarding the trial, the independent Data Monitoring Committee recommended that the trial proceed as planned and that there was no need to change the patient accrual goals for this trial. The Data Monitoring Committee also declared the design and conduct of the trial sound, and raised no safety concerns. Antigenics remains blinded to the efficacy data from the trial. The final analysis for C-100-12 will be triggered once a pre-specified number of events occur. An event is defined as a recurrence of a patient's renal cell carcinoma or a

death of a patient. Events are reviewed and confirmed, on a blinded basis, by an independent Clinical Events Committee comprising an expert radiologist and an expert oncologist. Based on the overall trend of events in C-100-12 to date, we estimate that we could have the required number of events by year-end and we estimate that the earliest the final analysis for this trial will occur is in early 2005.

During 2004, we plan to initiate a second Phase III, multicenter, international trial for renal cell carcinoma. We intend to use this additional Phase III trial to support the potential accelerated approval of Oncophage based on data from our currently ongoing C-100-12 Phase III trial in renal cell carcinoma. We plan to request a formal meeting with the FDA during the first half of 2004 to review and seek guidance on our product approval strategy for Oncophage in renal cell carcinoma because we have not had detailed discussions or formally asked the FDA if our overall product approval strategy for Oncophage in renal cell carcinoma is acceptable. Additionally, the FDA has not reviewed the protocol for our planned second Phase III trial in renal cell carcinoma.

### ***Melanoma***

***Background.*** Melanoma is the most serious form of skin cancer. According to the American Cancer Society, melanoma accounts for only about 4 percent of skin cancer cases, yet it causes about 79 percent of skin cancer deaths. The American Cancer Society also estimates that physicians will diagnose about 55,100 new cases of melanoma in the United States in 2004 and that the disease will kill approximately 7,910 people in 2004. The incidence of melanoma is growing at a rate of 4 to 7 percent per year, which is substantially faster than the growth in incidence rates of most other cancers.

Oncologists treat advanced or metastatic melanoma, also known as stage III or IV, with surgery, radiation therapy, immunotherapy, or chemotherapy, depending on the case. Approximately 20 percent of all melanoma patients at the time of their first diagnosis have stage III or stage IV disease. Existing treatments have not significantly improved overall survival of patients with melanoma. The median survival of patients with stage III melanoma varies widely according to published literature. According to published literature, the median survival of patients with late stage III melanoma is about 24 months and patients with stage IV melanoma have a median survival of about seven months. Although oncologists use various treatments, the only FDA approved therapies for patients with metastatic melanoma are high-dose intravenous interleukin-2 and alpha interferon, another human cytokine.

***Clinical Trials.*** We have treated 36 patients in a Phase I/II clinical trial, evaluating Oncophage as a treatment for late stage III and early stage IV metastatic melanoma, as well as 45 patients in a Phase II clinical trial in patients with stage IV disease. The investigator reported data from this Phase II trial showing that 28 patients had residual disease after surgery and that of these patients, five patients responded favorably to Oncophage including two who were reported to have achieved complete response for more than two years. The investigators also reported that Oncophage vaccination generated anti-melanoma immune responses in about one-half of the patients. Results of this Phase II trial were presented both at the American Society of Clinical Oncologists, or ASCO, meeting in May 2001 and the American Association for Cancer Research, or AACR, meeting in October 2001 where it was selected by the conference organizers as one of six presentations out of over 800 to be highlighted and presented to the press. In October 2002, the results from this trial were published in the *Journal of Clinical Oncology*, the official journal of ASCO.

Oncophage received Fast Track designation for the treatment of melanoma in February 2002. Oncophage also received Orphan Drug status in metastatic melanoma from the FDA in July 2002. In February 2002, we initiated a multicenter, international Phase III trial in metastatic melanoma identified as Study C-100-21. In November 2003, the FDA lifted the partial clinical hold that it had placed on our Phase III trials for Oncophage due to concerns related to the product characterization of Oncophage. After reviewing the



additional Oncophage product characterization information that we submitted, the FDA lifted the partial clinical hold approximately 13 weeks after it had imposed the hold.

During 2004, we plan to initiate a second Phase III trial in melanoma in collaboration with a large cooperative group in Europe. We have not had detailed discussions or formally asked the FDA if our overall product approval strategy for Oncophage in melanoma is acceptable. We plan to request a formal meeting with the FDA during 2004 to review and provide guidance on our product approval strategy for Oncophage in melanoma.

### ***Other Cancers***

Oncophage has also been studied in other cancers, including colorectal cancer, non-Hodgkin's lymphoma, pancreatic cancer and gastric cancer. Recent data from some of these trials is summarized below. During 2004, we also plan to begin enrollment in additional Oncophage Phase I/II trials for lung cancer and for breast cancer.

*Colorectal.* Results from a Phase II clinical trial in patients with metastatic colorectal cancer were published as a featured article in the August 15, 2003 issue of *Clinical Cancer Research*. The paper presented data on 29 patients with stage IV colorectal cancer that had spread to the liver who had undergone complete resection, or surgical removal, of their metastasized disease. The paper also showed that in the trial, patients who responded immunologically to the vaccine (52 percent of study subjects) had a statistically significant survival advantage compared with patients who did not respond immunologically. Responders demonstrated a two-year overall survival rate of 100 percent, compared with 50 percent for nonresponders, and a disease-free survival rate of 51 percent, compared with 8 percent among nonresponders. This trial has been closed to enrollment.

*Non-Hodgkin's Lymphoma.* Findings from a Phase II, open-label, single-arm study for newly diagnosed or relapsed low-grade, indolent, or slow-growing, non-Hodgkin's lymphoma were presented by the principal investigator from the trial at the ASCO meeting in June 2003. The study was conducted at M. D. Anderson Cancer Center. Among the 10 patients who received Oncophage in the Phase II trial, there were responses reported in six: one partial response, two minor responses and three disease stabilizations. These findings were updated at the American Society of Hematology, or ASH, 45th annual meeting in December 2003. The study's lead investigator reported indications of clinical activity in eight out of 14 evaluable patients in the trial, including one partial response, two minor responses and five disease stabilizations. Oncophage was reported to be well tolerated and without significant adverse effects in this study. This trial has been closed to enrollment.

*Gastric.* Data from a Phase I/II clinical trial evaluating Oncophage as a treatment for metastatic gastric cancer was presented at the ASCO meeting in 2002. In the trial, 15 patients with gastric cancer (stage II to stage IV) underwent surgery, then Oncophage vaccination. At 32 months post-surgery, three were still disease-free, nine had survived, and the mean disease-free and overall survival rates were seven months and over 16 months, respectively. No toxicity was observed to be associated with Oncophage treatment. This trial was conducted with clinical investigators at the Johannes Gutenberg-University Hospital in Mainz, Germany, Technical University of Munich in Germany, and the Russian Oncology Research Center in Moscow, Russia.

*Pancreatic.* In early 1999, we conducted a pilot Phase I clinical trial evaluating Oncophage as a treatment for resectable pancreatic cancer. We conducted the trial with clinical investigators at the Memorial Sloan-Kettering Cancer Center. Initially, five patients were treated. Subsequently, five more patients were treated. Updated data from this pilot study were presented at the 12th annual European Cancer Conference, or ECCO, in September 2003. These data were highlighted in a press release issued by the Federation of European Cancer Societies during the ECCO conference. In this trial, which included 10 evaluable patients,

the manufacture of Oncophage was feasible and no toxicity associated with vaccination was observed. Recent follow-up data from patients in this Phase I trial of Oncophage indicates a median overall survival of over 26 months, with one patient still alive and disease-free after more than five years and two other patients alive and disease-free 2.7 and 2.6 years after treatment. Published historical data from Memorial Sloan-Kettering Cancer Center indicates a median survival of approximately 14.3 months in a similar patient population. This trial has been closed to enrollment.

### ***Manufacturing***

Oncophage has been manufactured in a portion of a 58,725 square-foot facility in Woburn, Massachusetts. We have qualified a new 162,000 square-foot manufacturing and research and development facility in Lexington, Massachusetts and we have transferred manufacturing operations to a portion of this new facility. We are currently leasing approximately 94,000 square-feet of this facility and plan to expand to 132,000 square feet on or before August 2005 with a second planned expansion to 162,000 square feet on or before March 2006. We estimate that the facility's current capacity, for Oncophage and AG-858 combined, is approximately 10,000 patient doses per year, expandable to between 40,000 and 50,000 patient doses per year. On average, it takes eight to ten hours of direct processing time to manufacture a patient batch of Oncophage.

After manufacturing, Oncophage is tested and released by our quality systems staff. The quality control organization performs a series of release assays designed to ensure that the product meets all applicable specifications. Our quality assurance staff also reviews manufacturing and quality control records prior to batch release in an effort to assure conformance with Good Manufacturing Practices as mandated by the FDA and foreign regulatory agencies.

Our Oncophage manufacturing staff is rigorously trained and routinely evaluated for conformance to manufacturing procedures and quality standards. This oversight is intended to ensure compliance with FDA regulations and to provide consistent vaccine output. Our quality control and quality assurance staff is similarly trained and evaluated as part of our effort to ensure consistency in the testing and release of the product, materials, equipment and facilities.

### **AG-858**

AG-858 is a personalized therapeutic cancer vaccine based on our heat shock protein technology for the treatment of chronic myelogenous leukemia, or CML, a type of cancer characterized by the proliferation of abnormal white blood cells. AG-858 consists of purified HSPPCs based on a specific heat shock protein called HSP70. Because CML is a cancer of the blood, these HSPPCs are purified from a patient's white blood cells, which are obtained through leukapheresis, a method of blood filtration through a machine whereby white blood cells are removed and other blood cell types are returned to the donor.

*Background.* The American Cancer Society estimates that there will be about 33,440 new cases of all types of leukemia in 2004 in the United States. Of these, about 4,600 cases will be diagnosed as chronic myelogenous leukemia. The current standard of care for CML is treatment with Gleevec™ (imatinib mesylate, Novartis).

*Clinical Trials.* In December 2002, interim data was reported from a pilot trial conducted at the University of Connecticut School of Medicine. This pilot trial studied the feasibility of using purified HSP70 and its associated antigens, also known as HSPPC-70, in combination with Gleevec for the treatment of CML. In this exploratory trial, it was reported that five out of the five evaluable patients showed objective clinical responses. Updated data were then announced in an oral presentation at the ASCO meeting in June 2003 in which responses were reported in seven of the eight patients evaluated. Further data on this HSPPC-70 study were presented at the ASH meeting in December 2003: of the 17 evaluable patients,

11 experienced a reduction in levels of cytogenetic or molecular disease burden (as measured by cytogenetic tests or polymerase chain reaction, respectively). HSPPC-70 vaccines were successfully prepared for all patients and were well tolerated in the clinical trial.

In April 2003, we initiated an international, multi-center Phase II trial combining AG-858, Antigenics' HSP70-based product candidate, with Gleevec. The trial will evaluate the safety and cytogenetic response of this combination treatment in up to 40 patients with chronic phase CML who are currently receiving Gleevec treatment but are cytogenetically positive. At year-end 2003, we had enrolled approximately 15 patients.

### ***Manufacturing***

We have also transferred the manufacture of AG-858 to our facility in Lexington, Massachusetts during the first quarter of 2004. The facility's initial capacity, for Oncophage and AG-858 combined, is approximately 10,000 patient doses per year, expandable to between 40,000 and 50,000 patient doses per year. On average, it takes 20 to 25 hours of direct processing time to manufacture a patient batch of AG-858. We are developing a revised manufacturing process for AG-858 to reduce this processing time. All patient doses of HSPPC-70 for the pilot study were manufactured at the University of Connecticut, where the study is being conducted.

The manufacturing process for AG-858 is based on similar principles as those used for Oncophage. After manufacturing, AG-858 is fully tested and released by our quality systems staff. The quality control organization performs a series of release assays designed to ensure that the product meets all applicable specifications. Our quality assurance staff also reviews manufacturing and quality control records prior to batch release in an effort to assure conformance with Good Manufacturing Practices as mandated by the FDA and key foreign regulatory agencies.

Our AG-858 manufacturing staff is rigorously trained and routinely evaluated for conformance to manufacturing procedures and quality standards. This oversight is intended to ensure compliance with FDA regulations and to provide consistent vaccine output. Our quality control and quality assurance staff is similarly trained and evaluated as part of our effort to ensure consistency in the testing and release of the product, materials, equipment and facilities.

### **AG-702/AG-707**

AG-702/AG-707 is our therapeutic vaccine program based on our heat shock protein technology for the treatment of genital herpes, a chronic disease caused by herpes simplex virus-2, or HSV-2. AG-702 consists of HSPPCs that we manufacture by complexing, or binding, a recombinantly produced heat shock protein to a single peptide of HSV-2 and is referred to as a monovalent vaccine. In theory, this monovalent vaccine would only address approximately 40 percent of the patient population due to variances in patients' genetic makeup. AG-707 is a multivalent vaccine (a type of vaccine that addresses multiple targets) containing 49 HSV-2 peptides. The multivalent AG-707 is therefore designed to address HSV-2 infection in a broad population of patients. AG-707 is designed to be a off-the-shelf product because the antigenic profile of HSV-2 is similar in all patients so personalization of the products is not required.

*Background.* The US Centers for Disease Control and Prevention estimates that 45 million people in the United States ages 12 and older, or one out of five of the total adolescent and adult population, are infected with HSV-2. The World Health Organization estimates that approximately 21 million people worldwide are infected each year. Genital herpes is currently treated with palliative antiviral agents that reduce further replication of the virus.

*Clinical Trials.* We initiated a Phase I clinical trial of AG-702 as a proof-of-principle study in the fourth quarter of 2001 at The University of Washington. This is a dose-escalation study in both healthy

volunteers and genital herpes patients. We expect to have the final data from this trial during 2004. We expect to file an Investigational New Drug application (IND) for AG-707, our multivalent product candidate, for the treatment of genital herpes in the first half of 2004 and, assuming allowance of the IND by the FDA, we would expect to begin enrolling patients shortly thereafter.

### ***Manufacturing***

The synthetic peptide components used in AG-702/AG-707 are manufactured for us by a contract manufacturer. The recombinant HSP70 used in AG-702 was also produced by a contract manufacturer. We intend to produce the recombinant HSP70 for AG-707, as well as conduct the fill and finish operation in our new Lexington, Massachusetts facility.

### **Aroplatin**

Aroplatin is a novel formulation of a third-generation platinum chemotherapeutic that is similar to oxaliplatin, a recently approved treatment for colorectal cancer. Laboratory studies indicate that Aroplatin demonstrates considerable antitumor activity. Platinum chemotherapeutics are cancer drugs containing the metallic element platinum, which has been shown to have some anti-cancer effects. Furthermore, Aroplatin may employ a different mechanism of action compared with current platinum-based chemotherapeutics, such as carboplatin and cisplatin. These findings suggest that Aroplatin may be useful in cancers that are already resistant to platinum agents. Aroplatin is also encapsulated in a liposome, or a round shell of phospholipids, the basic components of human cell walls. Liposome encapsulation has been shown to increase a drug's bioavailability, or the amount of time and specific distribution within the body, which can extend the treatment's effect. In some cases, liposomal drugs have been shown to accumulate at the site of a tumor, delivering higher concentrations of the drug to a disease target. The liposomal delivery system can also help to reduce the damaging effects of some drugs on healthy tissues.

### ***Clinical Trials***

We initiated a Phase II trial for refractory advanced colorectal cancer in 2002. This single-arm, open-label trial, conducted at the Arizona Cancer Center, was designed to evaluate the effect of Aroplatin monotherapy in patients whose disease is not responsive to standard first-line cancer treatments (5-fluorouracil/leucovorin or capecitabine and irinotecan). In September 2003, the investigators presented findings from this trial at ECCO. One out of the 15 evaluable patients demonstrated a partial clinical response and two experienced disease stabilization. In addition, researchers observed that Aroplatin appears well tolerated in this pretreated patient population. This trial is closed to enrollment.

In January 2003, we also initiated at the John Wayne Cancer Center, in Santa Monica, California, a Phase I/II trial of Aroplatin for a variety of advanced solid tumors amenable to platinum therapy. This study is closed to enrollment.

We are currently conducting preclinical experiments with Aroplatin to determine how the formulation of Aroplatin could be improved. Subject to the results of these experiments, we may launch a series of further preclinical experiments to support future clinical trials with an improved formulation or we may make the decision to suspend or delay the current development of Aroplatin. We expect to complete our initial preclinical experiments by the middle of 2004.

## ***Manufacturing***

Aroplatin has been manufactured for us by contract manufacturers. These contract manufacturers also produce drug products for other pharmaceutical companies at clinical and commercial scale and are regularly inspected and qualified by US and foreign regulatory agencies.

## **QS-21**

### ***Introduction***

QS-21 is an adjuvant, or a substance added to vaccines and other immunotherapies that is designed to enhance the body's immune response to the antigen contained within the treatment. QS-21 is best known for its ability to stimulate antibody, or humoral, immune response, and has also been shown to activate cellular immunity. A natural product, QS-21 is a triterpene glycoside, or saponin, a natural compound purified from the bark of a South American tree called *Quillaja saponaria*. It is well characterized with a known molecular structure, thus distinguishing it from other adjuvant candidates, which are typically emulsions, polymers or biologicals.

QS-21 has been tested in over 3,100 patients in more than 90 clinical trials and has been shown to be significantly more effective in stimulating antibody responses than aluminum hydroxide or aluminum phosphate, the only adjuvants used in approved vaccines in the United States today.

Numerous studies have shown that the use of QS-21 adjuvant improves the quality of the immune response and reduces the quantity of antigen necessary to stimulate an immune response. Adding QS-21 to antigens generally broadens the type of antibody produced and increases the titer or amount of antibodies produced. These properties are expected to provide better protection against certain pathogens for which no effective vaccine is available.

### ***FeLV/QA-21 Vaccine***

Our FeLV vaccine is a recombinant subunit vaccine that uses an immune stimulant QA-21, which is in the same family as QS-21. The product is a prophylactic vaccine for feline leukemia, a highly contagious and commonly fatal disease in cats. The product was approved in 1990 in the United States and in 1991 in Europe and it represents 100 percent of our current product sales. We manufacture the product and sell it to Virbac S.A. who markets the product in Europe and Japan under their registered trademark Leucogen®.

FeLV vaccine is provided to Virbac through two agreements: a license agreement and a supply agreement. The license agreement provides Virbac exclusive, perpetual, worldwide rights to market Leucogen. The supply agreement expired in July 2002, at which point we began to supply product to Virbac through month-to-month supply agreements. We are currently negotiating for the possible divestiture of our manufacturing and certain intellectual property rights to the feline leukemia vaccine.

We generated \$3,465,000, \$2,627,000, \$1,606,000, \$363,000 and \$0 in revenues from product sales outside of the United States in 2003, 2002, 2001, 2000 and 1999 respectively, compared with no revenues from product sales in the United States during the same periods. We have no material long-term assets located outside of the United States.

### ***Partnered QS-21 Programs***

A number of pharmaceutical and biotech companies have licensed QS-21 for a variety of human diseases. Companies with active and ongoing QS-21 programs are GlaxoSmithKline, P.L.C., Progenics Pharmaceuticals, Inc., and Elan Corporation, plc. In return for rights to use QS-21, these companies have

agreed to pay us license fees, milestone payments, and royalties on product sales. We have retained worldwide manufacturing rights and have the right to subcontract manufacturing for QS-21. In addition to these companies, we have developed a number of academic collaborations to test new vaccine concepts and products containing QS-21.

### ***Manufacturing***

We manufacture QS-21 at a 40,000 square-foot facility in Framingham, Massachusetts. We are capable of producing up to 2 million doses per batch at this facility. We also manufacture the FeLV vaccine antigen and the associated QA-21 adjuvant (a less pure formulation for QS-21) for our FeLV vaccine at our Framingham facility. We produce commercial quantities of this product at the 400-liter fermentation scale. We have retained worldwide manufacturing rights and have the right to subcontract manufacturing for QS-21.

### **Preclinical Programs**

#### ***“Next Generation” Oncophage***

Our lead preclinical program is focused on a “next-generation” Oncophage vaccine, which incorporates several important innovations. With these advances, we expect to be able to manufacture sufficient quantities of a personalized cancer vaccine from much smaller tumor tissue samples. This approach would be designed to treat patients with earlier stages of disease in a broader array of cancers.

#### ***HSP Combinations***

During 2004, we will be launching a significant preclinical program to evaluate Oncophage in combination with other compounds such as other biologic and chemotherapeutic products. Some of these combination experiments will be conducted in collaboration with prospective pharmaceutical partners who have expressed an interest in studying certain of their compounds in combination with Oncophage.

### **Intellectual Property Portfolio**

We devote significant resources to protecting and expanding our intellectual property portfolio. We seek to protect our core technologies through a combination of patents, trade secrets, and know-how. We currently have exclusive rights to 70 issued United States patents and 97 foreign patents. We also have rights to 58 pending United States patent applications and 113 pending foreign patent applications. Our issued patents cover our core technologies including (i) HSPs such as Oncophage and AG-858 for treatment of cancers; (ii) HSPs such as AG-707 for treatment of infections; (iii) HSPs for treatment of autoimmune disorders; (iv) saponin adjuvants such as QS-21; and (v) liposomal drugs, including Aroplatin. In addition, several patent applications are related to technology based on HSP receptors, including CD91, one of our preclinical programs. The following tables provide detailed information regarding the United States patents and patent applications relating to our product candidates and technologies and their uses:

**Table 1**

<u>Products or Technologies</u>	<u>Oncophage® &amp; AG-858</u>	<u>AG-707</u>	<u>HSPs in Autoimmune Disorders</u>	<u>HSP Receptors</u>
<b>Number of issued U.S. patents . . . . .</b>	13	9	1	0
<b>Expiration range . . . . .</b>	2015 — 2018	2015 — 2017	2017	—
<b>Number of pending U.S. patent applications . . . . .</b>	7	4	0	5

We also have rights to 23 issued U.S. patents and 18 U.S. patent applications that are directed to various other HSP technologies. For each of our product candidates and technologies in Table 1, we have issued patents or pending patent applications in foreign territories. With the exception of one patent application that we own outright, all of our patent applications relating to Oncophage®, AG-858 and AG-707 are licensed exclusively to us.

**Table 2**

<u>Products or Technologies</u>	<u>QS-21</u>	<u>Aroplatin</u>
<b>Number of issued U.S. patents</b> .....	5	3
<b>Expiration range</b> .....	2008 — 2017	2010 — 2020
<b>Number of pending U.S. patent applications</b> .....	3	6

For each of our product candidates and technologies in Table 2, we have issued patents or pending patent applications in foreign territories. All patents and applications relating to QS-21 are owned by Antigenics. All of the issued U.S. patents and two of the U.S. patent applications relating to Aroplatin™ are licensed exclusively to us; we own the remaining four U.S. patent applications relating to Aroplatin™.

It is worth noting that:

- patent applications in the United States are currently maintained in secrecy until they are published, generally 18 months after they are first filed in any country;
- patent applications in other countries, likewise, generally are not published until 18 months after they are first filed in any country;
- publication of technological developments in the scientific or patent literature often lags behind the date of these developments; and
- searches of prior art may not reveal all relevant prior inventions.

In addition to our patents, we rely on our trade secrets and know-how to provide a competitive advantage, and we intend to continue to develop and protect this proprietary information. We take active measures to control access to know-how and trade secrets through confidentiality agreements, which we require almost all of our employees, consultants and scientific collaborators to execute upon the commencement of an employment or consulting relationship with us. These agreements generally provide that all confidential information developed or made known to the individual by us during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. In the case of employees and consultants, the agreements generally provide that all inventions conceived by the individual in the course of rendering services to us are assigned to us and become our exclusive property.

### **Regulatory Considerations**

Governmental authorities in the United States and other countries extensively regulate the preclinical and clinical testing, manufacturing, labeling, storage, record keeping, advertising, promotion, export, marketing and distribution, among other things, of our investigational product candidates. In the United States, the FDA under the Federal Food, Drug, and Cosmetic Act, the Public Health Service Act and other federal statutes and regulations, subject pharmaceutical products to rigorous review.

In order to obtain approval of a new product from the FDA, we must, among other requirements, submit proof of safety and efficacy as well as detailed information on the manufacture and composition of the product. In most cases, this proof entails extensive preclinical, clinical, and laboratory tests. The FDA may also require

confirmatory trials, post-marketing testing and extra surveillance to monitor the effects of approved products or place conditions on any approvals that could restrict the commercial applications of these products.

The first stage of the FDA approval process for a new biologic or drug involves completion of preclinical studies and the submission of the results of these studies to the FDA. This, together with proposed clinical protocols, manufacturing information, analytical data and other information, in an investigational new drug application, or IND, must become effective before human clinical trials may commence. Preclinical studies involve laboratory evaluation of product characteristics and animal studies to assess the efficacy and safety of the product. The FDA regulates preclinical studies under a series of regulations called the current "Good Laboratory Practices" regulations. If the sponsor violates these regulations, in some cases, the FDA may invalidate the studies and require that the sponsor replicate those studies.

After the IND becomes effective, a sponsor may commence human clinical trials. The sponsor typically conducts human clinical trials in three sequential phases, but the phases may overlap. In Phase I trials, the sponsor tests the product in a small number of patients or healthy volunteers, primarily for safety at one or more doses. Phase I trials in cancer however are often conducted with patients that are not healthy who have end-stage or metastatic cancer. In Phase II, in addition to safety, the sponsor evaluates the efficacy of the product in a patient population somewhat larger than Phase I trials. Phase III trials typically involve additional testing for safety and clinical efficacy in an expanded population at geographically dispersed test sites. The sponsor must submit to the FDA a clinical plan, or "protocol," accompanied by the approval of the institution participating in the trials, prior to commencement of each clinical trial. The FDA may order the temporary or permanent discontinuation of a clinical trial at any time.

The sponsor must submit to the FDA the results of the preclinical and clinical testing, together with, among other things, detailed information on the manufacture and composition of the product, in the form of a new drug application or, in the case of a biologic, like Oncophage or AG-858, a biologics license application. In a process which can take a year or more, the FDA reviews this application and, when and if it decides that adequate data is available to show that the new compound is both safe and effective for a particular indication and that other applicable requirements have been met, approves the drug or biologic for marketing. The amount of time taken for this approval process is a function of a number of variables, including the quality of the submission and studies presented, the potential contribution that the compound will make in improving the treatment of the disease in question, and the workload at the FDA.

Congress enacted the Food and Drug Administration Modernization Act of 1997 in part to ensure the availability of safe and effective drugs, biologics, and medical devices by expediting the FDA review process for new products. The Modernization Act establishes a statutory program for the approval of Fast Track products, including biologics. A Fast Track product is defined as a new drug or biologic intended for the treatment of a serious or life-threatening condition that demonstrates the potential to address unmet medical needs for this condition. Under the Fast Track program, the sponsor of a new drug or biologic may request the FDA to designate the drug or biologic as a Fast Track product at any time during the clinical development of the product. This designation assures access to FDA personnel for consultation throughout the development process as well as a six-month review of marketing applications for the designated product. Our most advanced product, Oncophage, has been designated by the FDA as a Fast Track product in renal cell carcinoma and metastatic melanoma. We cannot predict whether these designations will impact the timing or likelihood of FDA approval of Oncophage.

The Modernization Act specifies that the FDA must determine if the product qualifies for Fast Track designation within 60 days of receipt of the sponsor's request. The FDA can base approval of a marketing application for a Fast Track product on an effect on a clinical endpoint or on another endpoint that is



reasonably likely to predict clinical benefit. The FDA may subject approval of an application for a Fast Track product to:

- post-approval studies to validate the surrogate endpoint or confirm the effect on the clinical endpoint; and
- prior review of all promotional materials.

In addition, the FDA may withdraw its approval of a Fast Track product on a number of grounds, including the sponsor's failure to conduct any required post-approval study with due diligence.

If a preliminary review of the clinical data suggests that a Fast Track product may be effective, the FDA may initiate review of sections of a marketing application for a Fast Track product before the sponsor completes the application. This rolling review is available if the applicant provides a schedule for submission of remaining information and pays applicable user fees. However, the time periods specified under the Prescription Drug User Fee Act concerning timing goals to which the FDA has committed in reviewing an application, do not begin until the sponsor submits the application.

The Orphan Drug Program provides a mechanism for the FDA to acknowledge that a product is designed to treat a disease with limited prevalence in the United States. An Orphan Drug designation bestows certain advantages including extending marketing exclusivity if the product is ultimately approved for marketing, considerations in trial size and design based on the actual patient population, and tax credits for some research and development expenses. We hold orphan drug designations for Oncophage in renal cell carcinoma and in melanoma.

The FDA may, during its review of a new drug application or biologics license application, ask for additional test data. If the FDA does ultimately approve a product, it may require post-marketing testing, including potentially expensive Phase IV studies, and extra surveillance to monitor the safety and effectiveness of the drug. In addition, the FDA may in some circumstances impose restrictions on the use of the drug that may be difficult and expensive to administer, and may require prior approval of promotional materials.

Before approving a new drug application or biologics license application, the FDA will inspect the facilities at which the product is manufactured and will not approve the product unless the manufacturing facilities are in compliance with current Good Manufacturing Practices. In order to accomplish this inspection, a local field division of the FDA is responsible for completing this inspection and providing a recommendation for or against approval. We are in communication with the field division of the FDA regarding our manufacturing facilities. This effort is intended to assure appropriate facility and process design to avoid potentially lengthy delays in product approvals due to inspection deficiencies.

Following approval, the manufacture, holding, and distribution of a product must be in compliance with current Good Manufacturing Practices. Manufacturers must expend time, money, and effort in the area of production and quality control and record keeping and reporting to ensure full compliance with those requirements. The labeling, advertising, promotion, marketing, and distribution of a drug or biologic product must be in compliance with FDA regulatory requirements. Failure to comply with applicable requirements can lead to the FDA demanding that production and shipment cease, and, in some cases, that the manufacturer recall products, or to enforcement actions that can include seizures, injunctions, and criminal prosecution. These failures can also lead to FDA withdrawal of approval to market a product.

We are also subject to regulation by the Occupational Safety and Health Administration, or OSHA, and the Environmental Protection Agency, or EPA, and to regulation under the Toxic Substances Control Act, the Resource Conservation and Recovery Act and other regulatory statutes, and may in the future be subject to

other federal, state or local regulations. Either or both OSHA and/or the EPA may promulgate regulations that may affect our research and development programs.

Sales of pharmaceutical products outside the United States are subject to foreign regulatory requirements that vary widely from country to country. Whether or not we have obtained FDA approval, we must obtain approval of a product by comparable regulatory authorities of foreign countries prior to the commencement of marketing the product in those countries. The time required to obtain this approval may be longer or shorter than that required for FDA approval.

## **Competition**

Competition in the pharmaceutical and biotechnology industries is intense. Many pharmaceutical or biotechnology companies have products on the market and are actively engaged in the research and development of products for the treatment of cancer, infectious diseases, and autoimmune disorders. In addition, many competitors focus on immunotherapy as a treatment for cancer, infectious diseases, and autoimmune disorders. In particular, some of these companies are developing autologous cancer vaccines. Others are focusing on developing heat shock protein products. We compete for funding, access to licenses, personnel, and third-party collaborations. In addition, many competitors have substantially greater financial, manufacturing, marketing, sales, distribution, and technical resources, and more experience in research and development, clinical trials and regulatory matters, than we do. A competing company developing, or acquiring rights to, a more efficacious therapeutic product for the same diseases we are targeting, or one which offers significantly lower costs of treatment, could render our products noncompetitive or obsolete.

Academic institutions, governmental agencies, and other public and private research institutions conduct significant amounts of research in biotechnology, medicinal chemistry, and pharmacology. These entities have become increasingly active in seeking patent protection and licensing revenues for their research results. They also compete with us in recruiting and retaining skilled scientific talent.

We are aware of certain programs and products under development by others that may compete with our programs and products. Several companies, including Biomira Inc., CancerVax Corporation, Cell Genesys Inc., Corixa Corporation, Dendreon Corporation, Genzyme Corporation and Intracel Corporation, are developing treatments for cancer based on modulation of the immune system, including cancer vaccines. In addition, several companies, including Pfizer Inc, Bristol Myers-Squibb, Genentech, Roche, Merck, Schering-Plough, AstraZeneca, and Wyeth, have expertise in, and are developing products for the treatment of cancer, infectious diseases, and autoimmune disorders.

Certain companies to which we have licensed QS-21 have also licensed vaccine adjuvants form direct competitors, such as Coley Pharmaceutical Group, Corixa Corporation and Avant Immunotherapeutics. The existence of products developed by these and other competitors, or other products of which we are not aware or which other companies may develop in the future, may adversely affect the marketability of products we develop.

## **Employees**

As of January 30, 2004, we had 222 employees, of whom 27 have PhDs and 5 have MDs. None of our employees are subject to a collective bargaining agreement. We believe that we have good relations with our employees.

## Corporate History

Antigenics L.L.C. was formed as a Delaware limited liability company in 1994 and was converted to Antigenics Inc., a Delaware corporation, in February 2000.

## Availability of Periodic SEC Reports

Our Internet website address is [www.antigenics.com](http://www.antigenics.com). We make available free of charge through our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the SEC. The contents of our website are not part of, or incorporated into, this document.

## Item 1A. Directors and Executive Officers of the Registrant

Set forth below is certain information regarding our executive officers, certain key employees, and directors, including their age as of March 1, 2004:

<u>Name</u>	<u>Age</u>	<u>Title</u>
Garo H. Armen, Ph.D. ....	51	Chairman of the Board and Chief Executive Officer
Pramod K. Srivastava, Ph.D. ....	48	Director, Chief Scientific Officer, Founding Scientist and Chairman of the Scientific Advisory Board
Russell H. Herndon ....	45	President, Commercial Operations
Jeff D. Clark ....	31	Chief Financial Officer
Neal Gordon, Ph.D. ....	42	Senior Vice President, Manufacturing Operations
Renu Gupta, MD ....	48	Senior Vice President, Development
Noubar Afeyan, Ph.D. ....	41	Director
Frank V. AtLee III(2)(3)(4) ....	63	Director
Gamil G. de Chadarevian ....	52	Director, Vice Chairman of the Board
Tom Dechaene(2) ....	44	Director
Margaret Eisen(1)(2) ....	50	Director
Wadih (Bill) Jordan(1) ....	69	Director
Mark Kessel(3)(4) ....	62	Director

- (1) Member of the Compensation Committee
- (2) Member of the Audit and Finance Committee
- (3) Member of the Corporate Governance Committee
- (4) Member of the Litigation Committee

GARO H. ARMEN, Ph.D. co-founded Antigenics in 1994 and has been the Chairman of the Board and Chief Executive Officer since inception. Dr. Armen was previously a Senior Vice President of Research for Dean Witter Reynolds, focusing on the chemical and pharmaceutical industries. Dr. Armen has also served as an Associate Professor at the Merchant Marine Academy and as a research associate at the Brookhaven National Laboratory. He currently serves as non-executive Chairman of Elan Corporation, plc and a director of Color Kinetics Inc. Dr. Armen is also the founder and president of the Children of Armenia Fund.

Dr. Armen received his Ph.D. degree in physical chemistry from the City University of New York in 1979. Since 1990, Dr. Armen has been the managing general partner of Armen Partners, L.P., an investment partnership specializing in public and private healthcare and biotechnology investments.

PRAMOD SRIVASTAVA, Ph.D. co-founded Antigenics in 1994, and has served as the Chairman of the Scientific Advisory Board since inception. Dr. Srivastava is the Director of the Center for Immunotherapy of Cancer and Infectious Diseases at the University of Connecticut. He performed his postdoctoral training at Yale University and the Sloan-Kettering Institute for Cancer Research. Dr. Srivastava serves on the Scientific Advisory Council of the Cancer Research Institute, New York, and was a member of the Experimental Immunology Study Section of the National Institutes of Health of the United States Government from 1994 until 1999. Dr. Srivastava is a past recipient of the First Independent Research Support & Transition Award of the National Institutes of Health (1987), the Irma T. Hirschl Scholar Award (1988), the Investigator Award of the Cancer Research Institute, New York (1991), the Mildred Scheel Lectureship (1994), and the Sigma Tau Foundation Speakership (1996). In 1997, he was inducted into the Roll of Honor of the International Union against Cancer and was listed in the Who's Who in Science and Engineering. He is among the twenty founding members of the Academy of Cancer Immunology. Dr. Srivastava earned his Ph.D. in Biochemistry from the Centre for Cellular and Molecular Biology, Hyderabad, India. Dr. Srivastava is a director of CambriaTech Holding S.A.

RUSSELL H. HERNDON has served as our President of Commercial Operations since November 2003. Prior to this position, Mr. Herndon served as our President from January 2002 and as our Chief Operating Officer from January 2001. Mr. Herndon was with Genzyme Corporation from 1989 through 2000, holding various management positions including, most recently, President of the Genzyme Tissue Repair Division and, from 1997 to 1999, Senior Vice President of Genzyme. During his tenure at Genzyme, Mr. Herndon identified and organized major programs to streamline and improve operations, implement cost reductions and flexibly and efficiently expand production capacity. Mr. Herndon received a Bachelor's Degree in biology from Barton College and attended Harvard Business School for its Program in Management and Development.

JEFF D. CLARK joined Antigenics as Director, Strategic Planning in 2001 and was appointed Chief Financial Officer in March 2003. Mr. Clark's professional experience includes several years at PricewaterhouseCoopers, where he worked in the firm's tax mergers and acquisitions consulting practice and advised clients on structuring and due diligence matters for numerous corporate transactions. Prior to joining Antigenics in 2001, he was Vice President of Finance and Controller for PrimeStreet Corporation, an Internet firm that specialized in small business financing, where he built and led the finance and accounting function and was a key member of the firm's senior management team. Mr. Clark, a certified public accountant, began his career at Coopers & Lybrand LLP, and earned his bachelor's and master's degrees from the University of Texas School of Business in Austin, Texas.

NEAL GORDON, Ph.D. has served as Antigenics' Senior Vice President of Manufacturing Operations since January 2001. Prior to this position he served as Vice President of Operations from May 1999 and as our Vice President Process Development from July 1998. Dr. Gordon joined Antigenics in 1998, following ten years at PerSeptive Biosystems, a division of PE Corporation. Most recently, he was Senior Director of Chromatography Research and Development, involved in the development and application of innovative technologies for the purification and analysis of biopolymers. Earlier he was a product development engineer at Proctor & Gamble. In 1983, Dr. Gordon obtained a Bachelors Degree in chemical engineering from McGill University, and a Ph.D. in biochemical engineering from the Massachusetts Institute of Technology in 1989.

RENU GUPTA, MD joined Antigenics as Senior Vice President of Development in November 2003. Prior to this position Dr. Gupta was the vice president and head of US clinical research and development at

Novartis. Dr. Gupta also spent two years at Covance as Vice President, and head of Medical, Safety and Therapeutics and almost ten years at Bristol-Myers Squibb, where she was responsible for high-level global marketing strategy, clinical research and business development. Dr. Gupta received her bachelor and medical degrees from the University of Zambia and completed her medical training at Albert Einstein Medical Center in Philadelphia and the University of Pennsylvania's Children's Hospital of Philadelphia.

NOUBAR AFEYAN, Ph.D. has been a director since 1998. Dr. Afeyan is Senior Managing Director and CEO of Flagship Ventures, a leader in creating, funding and developing new ventures in both life science and information technology sectors. He is also a Senior Lecturer at MIT's Sloan School of Management. Until August 1999, Dr. Afeyan was Senior Vice President and Chief Business Officer of Applera Corp. a life science company, (previously PE Corp.). Until 1997, Dr. Afeyan was the Chairman and CEO of PerSeptive Biosystems, a leading firm in the bio-instrumentation field that he founded in 1987 and led until its merger with PE Corp. Dr. Afeyan has been a founding team member, investor and active board member/advisor for several other high-tech startups and currently serves on the board of several private companies including Color Kinetics Inc. In addition, he is a member of the Board of Governors of Boston University Medical School, the Board of Advisors for the Whitehead Institute at MIT, and the Advisory Council of the McGowan Institute for Regenerative Medicine. He has authored numerous scientific publications and patents. Dr. Afeyan earned his undergraduate degree in Chemical Engineering from McGill University in Montreal and his Ph.D. in biochemical engineering from the Massachusetts Institute of Technology.

FRANK V. ATLEE III has been a director since July 2002. Mr. AtLee is currently a director of Monsanto and was the Chairman of the Board of the new Monsanto Company from June 2000, until October 2003. He was Monsanto's interim president and CEO from December 2002 to May 2003. Mr. AtLee is also on the board of Nereus Pharmaceuticals Inc. and serves as Chairman of the Advisory Board for Arizona BioDesign Institute (AzBio), a research initiative at Arizona State University. Prior to becoming Monsanto's Chairman, he spent 28 years with American Cyanamid before retiring as President and Chairman of Cyanamid International. In his years with American Cyanamid, Mr. AtLee had a broad range of responsibilities including leadership of the worldwide medical business, marketing and sales management in industrial chemicals, vice president for the company's agricultural division, worldwide leadership of the organic chemicals group, vice president of Lederle Laboratories, and president of Cyanamid's Europe/Mideast/Africa division. Mr. AtLee is a native of Richmond, VA, who graduated from Lynchburg (VA) College with a bachelor's degree in biology and chemistry. He served three years as an officer in the U.S. Marine Corps.

GAMIL DE CHADAREVIAN has served as Vice Chairman of the Board since 1995 and served as Executive Vice President International from 1998 to 2001. Until April of 1998, he was Managing Director of Special Projects at Alza International, a pharmaceutical company. From 1992 to 1993, Mr. de Chadarevian was the Vice President of Corporate Development for Corange London Limited, a pharmaceutical equipment manufacturing company. Prior to 1992, Mr. de Chadarevian held positions at Pasfin Servizi Finanziaria SpA, GEA Consulenza and Credit Suisse. He is also co-founder and serves as an advisor to several private health care companies in the United States and Europe. Mr. de Chadarevian is the founder of Ikonisys, Inc., CambriaTech Holding S.A., and Ophthalmopharma Ltd., which are privately held companies. He serves on the Advisory Board of Syntek Capital AG and serves as a consultant to Ivax Corporation. He also is a non-executive board member of Friends of San Patrignano, Inc., an Italian charitable organization. Mr. de Chadarevian received a Lic. Oec. Publ. Degree from the University of Zurich in Switzerland.

TOM DECHAENE has been a director since 1999. From 2000 to 2002 Mr. Dechaene was the Chief Financial Officer of SurfCast, Inc. He was with Deutsche Bank from 1991 through 1999, most recently as a director in the Principal Investments Group within the Equity Capital Markets division. Mr. Dechaene holds a law degree from Ghent University, Belgium, a degree in Applied Economics from the University of Antwerp and a MBA from INSEAD, France.

MARGARET EISEN has been a director since March 2003. Ms. Eisen joined Harbor Hills Capital in July 2003 as Chief Investment Officer. From 2001 to 2002, she was Managing Director of an investment bank specializing in mergers and acquisitions of investment management firms. From 1995 to 2003, Ms. Eisen was Managing Director of North American Equities of General Motors Investment Management Corporation, a registered investment advisor. Ms. Eisen is a member of the Board of Trustees of the Acorn family of mutual funds of Wagner Asset Management and a Trustee of the Lehman Brothers/First Trust Income Opportunity Fund and the Lehman Liquid Assets Trust. Ms. Eisen is a Director of Global Financial Group, a venture capital fund of funds, and is a member of the Investment Committee of the Board of Trustees of Smith College. Ms. Eisen previously served as Chair of the Institute for Financial Markets. Ms. Eisen received a bachelor's degree in government from Smith College, a master's in education from Lesley College, and a MBA from Babson College. She also holds the Chartered Financial Analyst designation.

WADIH (BILL) JORDAN has been a director since March 2003. Mr. Jordan is president of NearEast Pharma, a company marketing pharmaceuticals near east markets, and has served in such position since 1996. From 1993 to 1995, he served as Vice President of Cyanamid International, a research-based life sciences company, and from 1976 to 1993 served as managing director within Cyanamid International. Mr. Jordan received a bachelor's degree in agriculture at the American University of Beirut, Lebanon, and a certificate in international business from Columbia University.

MARK KESSEL has been a director since March 2003. Mr. Kessel is currently CEO and managing director of Symphony Capital LLC, a merchant banking firm specializing in life science and health care companies that he co-founded in 2002. From 1979 to 2001, he was a partner at the leading international law firm Shearman & Sterling and served as the firm's managing partner from 1990 to 1994. Mr. Kessel received a bachelor's degree in economics from the City College of New York and a law degree from Syracuse University.

## **Item 2. *Properties***

We signed a lease agreement, effective August 2003, for a 162,000 square-foot facility in Lexington, Massachusetts, which terminates in July 2013. We have an option to renew this lease for two additional ten-year periods. We began occupying approximately 94,000 square-feet of this new facility, beginning in October 2003. We plan to expand to 132,000 square feet on or before August 2005 with a second planned expansion to 162,000 square feet on or before March 2006.

We also lease approximately 40,000 square feet of laboratory, office and manufacturing space in Framingham, Massachusetts under a lease agreement that terminates in July 2010. We have an option to renew the lease for two additional five-year periods. We have sublet a portion of this facility and intend to sublet the majority of this facility to other tenants in 2004.

We lease approximately 58,725 square feet of manufacturing, research and development, and office space in Woburn, Massachusetts under a lease agreement that terminates in March 2004.

In addition, we lease 30,000 square feet of laboratory and office space in The Woodlands, Texas, a suburb of Houston, under a lease that expires in January 2008. We are not actively using this facility and have sublet the majority of this facility to other tenants.

We maintain our executive offices in New York, New York, in an office building in which we lease approximately 10,000 square feet. Our New York lease terminates in December 2006.

The Company believes substantially all of its property and equipment is in good condition and that it has sufficient capacity to meet its current operational needs. We do not anticipate experiencing significant

difficulty in retaining occupancy of any of our manufacturing or office facilities and will do so through lease renewals prior to expiration or through replacing them with equivalent facilities.

### **Item 3. *Legal Proceedings***

Antigenics, our Chairman and Chief Executive Officer Garo Armen, and two investment banking firms that served as underwriters in our initial public offering have been named as defendants in a civil class action lawsuit filed on November 5, 2001 in the Federal District Court for the Southern District of New York on behalf of a class of purchasers of our stock between February 3, 2000 and December 6, 2000. Similar complaints were filed against about 300 other issuers, their underwriters, and in many instances their directors and officers. These cases have been coordinated under the caption *In re Initial Public Offering Securities Litigation*, Civ. No. 21 MC 92 (SAS), by order dated August 9, 2001. The suit against Antigenics and Dr. Armen alleges that the brokerage arms of the investment banking firms charged secret excessive commissions to certain of their customers in return for allocations of our stock in the offering. The suit also alleges that shares of our stock were allocated to certain of the investment banking firms' customers based upon agreements by such customers to purchase additional shares of our stock in the secondary market. The complaint alleges that Antigenics is liable under Section 11 of the Securities Act of 1933, as amended (the Securities Act), and Dr. Armen is liable under Sections 11 and 15 of the Securities Act because our registration statement did not disclose these alleged practices. On April 19, 2002, the plaintiffs in this action filed an amended class action complaint, which contains new allegations. Again, similar amended complaints were filed with respect to the other 300 companies. In addition to the claims in the earlier complaint, the amended complaint alleges that Antigenics and Dr. Armen violated Sections 10(b) and 20 of the Securities Exchange Act and SEC Rule 10b-5 by making false and misleading statements and/or omissions in order to inflate our stock price and conceal the investment banking firms' alleged secret arrangements. The claims against Dr. Armen, in his individual capacity, have been dismissed without prejudice. On July 15, 2002, Antigenics and Dr. Armen joined the Issuer Defendants' Motion to Dismiss the Consolidated Amended Complaints. By order of the Court, this motion set forth all "common issues," i.e., all grounds for dismissal common to all or a significant number of Issuer Defendants. The hearing on the Issuer Defendant's Motion to Dismiss and the other Defendants' motions to Dismiss was held on November 1, 2002. On February 19, 2003, the Court issued its opinion and order on the Issuer Defendants' Motion to Dismiss. The Court granted Antigenics motion to dismiss the Rule 10(b)-5 and Section 20 claims with leave to amend and denied our motion to dismiss the Section 11 and Section 15 claims. Antigenics, along with numerous issuer companies, is in settlement discussions with plaintiffs and anticipates that a settlement will be reached without incurring significant out-of-pocket costs. At this time, we cannot make an estimate of possible loss, if any, related to this litigation.

On February 11, 2003, we filed a complaint for undisclosed damages in the Federal District Court in the Southern District of New York against U.S. Bancorp Piper Jaffray for breach of fiduciary duty and breach of contract, and against Scott Beardsley and Peter Ginsburg for libel and intentional interference with economic relations in connection with our January 2002 follow-on stock offering. The suit alleges that, in retaliation for not being named lead underwriter of the follow-on offering, U.S. Bancorp Piper Jaffray dropped its research coverage and Peter Ginsburg and Scott Beardsley made false and defamatory statements about Antigenics with the purpose of harming our reputation and interfering with the follow-on stock offering. As part of its regulatory focus on investment banking and research analyst conflicts, the National Association of Securities Dealers (NASD) found that Scott Beardsley threatened to discontinue research coverage and stop making a market in our stock if we did not select U.S. Bancorp Piper Jaffray as lead underwriter for the secondary offering. As part of a settlement with NASD, US Bancorp Piper Jaffray and Scott Beardsley were censured and fined \$250,000 and \$50,000, respectively. The defendants moved to dismiss all claims against them pursuant 12(b)6 and 9(b) of the Federal Rules of Civil Procedure. On January, 5, 2004, the United States

District Court, Southern District of New York, granted defendants' motion to dismiss the Rule 10b-5 claim but declined to decide the state law claims alleged against defendants. We intend to pursue our claims against defendants.

On February 19, 2004, Jonathan Lewis, M.D., our former Chief Medical Officer, filed a complaint against us in the United States District Court for the Southern District of New York. The suit alleges that we terminated Dr. Lewis without cause and have failed to pay severance benefits to which Dr. Lewis believes he is entitled. The complaint seeks relief for breach of contract and intentional infliction of emotional distress. We intend to vigorously defend against these claims.

We currently are a party to other legal proceedings as well. While our management currently believes that the ultimate outcome of any of these proceedings will not have a material adverse effect on our financial position, results of operations, or liquidity, litigation is subject to inherent uncertainty. Furthermore, litigation consumes both cash and management attention.

**Item 4. *Submission of Matters to a Vote of Security Holders***

No matters were submitted to stockholders for a vote during the fourth quarter of 2003.

**PART II**

**Item 5. *Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities***

Our common stock has been traded on The NASDAQ National Market under the symbol "AGEN" since February 4, 2000.

The following table sets forth, for the periods indicated, the high and low sale prices per share of our common stock as reported on the NASDAQ National Market.

	<u>High</u>	<u>Low</u>
2002		
First Quarter .....	\$16.87	\$11.01
Second Quarter .....	14.30	8.45
Third Quarter .....	11.00	6.60
Fourth Quarter .....	12.50	6.73
2003		
First Quarter .....	11.87	7.08
Second Quarter .....	16.00	7.75
Third Quarter .....	15.70	10.40
Fourth Quarter .....	13.75	9.60
2004		
First Quarter (through March 8, 2004) .....	12.46	9.63

As of February 29, 2004, there were approximately 2,100 holders of record and approximately 31,200 beneficial holders of our common stock.



We have never paid cash dividends on our common stock and we do not anticipate paying any cash dividends in the foreseeable future. We currently intend to retain future earnings, if any, for the future operation and expansion of our business. Any future payment of dividends on our common stock will be at the discretion of our board of directors and will depend upon, among other things, our earnings, financial condition, capital requirements, level of indebtedness and other factors that our board of directors deems relevant.

***Securities Authorized For Issuance Under Equity Compensation Plans***

<u>Plan Category</u>	<u>Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (1)</u>	<u>Weighted-average Exercise Price of Outstanding Options, Warrants and Rights</u>	<u>Number of Securities Remaining Available for Future Issuance under Equity Compensation Plan (Excluding Securities Reflected in Column (a)) (2)</u>
	(a)	(b)	(c)
Equity compensation plans approved by security holders .....	4,426,615	\$9.70	1,598,261
Equity compensation plans not approved by security holders .....	<u>—</u>		<u>—</u>
<b>Total</b> .....	<u>4,426,615</u>		<u>1,598,261</u>

(1) Includes (i) 2,529 options outstanding at a weighted average exercise price of \$69.02 assumed in connection with our merger with Aronex Pharmaceuticals, Inc. in July 2001; and (ii) 60,654 options outstanding at a weighted average exercise price of \$11.99 assumed in our merger with Aquila Biopharmaceuticals, Inc. in November 2000.

(2) Includes 219,587 shares that may be issued under our 1999 Employee Stock Purchase Plan

***Item 6. Selected Consolidated Financial Data***

We have derived the consolidated balance sheet data set forth below as of December 31, 2003 and 2002, and the consolidated statement of operations data for each of the years in the three-year period ended December 31, 2003, from our audited consolidated financial statements included elsewhere in this annual report. We have derived the consolidated balance sheet data as of December 31, 2001, 2000, 1999 and the consolidated statement of operations data for the years ended December 31, 2000 and 1999, from our audited consolidated financial statements, which are not included in this annual report. These consolidated financial statements have been audited by KPMG LLP, independent auditors.

You should read the selected consolidated financial data in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the notes to those consolidated financial statements included elsewhere in this report.

Given our history of incurring operating losses, management believes that it is more likely than not that any deferred tax assets, net of deferred tax liabilities, will not be realized. Therefore, there is no income tax benefit in the consolidated financial statements for periods ended after February 2000 because of a loss before income taxes and the need to recognize a valuation allowance on net deferred tax assets (see (2) below).

Changes in cash, cash equivalents and short-term investments, total current assets, total assets, and stockholders’ equity in the periods presented below include the effects of the receipt of net proceeds from our equity offerings, the exercise of stock options and warrants, and employee stock purchases that totaled

approximately \$92.5 million, \$56.7 million, \$0.9 million, \$66.8 million and \$41.1 million in 2003, 2002, 2001, 2000 and 1999, respectively.

	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>
	(In thousands, except per share data)				
<b>Consolidated Statement of Operations Data:</b>					
Revenue .....	\$ 4,450	\$ 3,412	\$ 4,555	\$ 443	\$ 581
Operating Expenses:					
Cost of goods sold .....	(1,942)	(1,337)	(1,064)	(363)	—
Research and development .....	(48,527)	(39,983)	(31,357)	(17,575)	(11,958)
General and administrative .....	(21,717)	(19,467)	(13,762)	(9,190)	(7,480)
Acquired in-process research and development(1) .....	—	—	(34,596)	(25,800)	—
Loss from operations .....	(67,735)	(57,375)	(76,224)	(52,485)	(18,857)
Interest income, net .....	919	1,225	2,683	5,756	723
Non-operating income .....	883	272	—	—	10
Net loss .....	(65,934)	(55,878)	(73,541)	(46,729)	(18,124)
Dividends on Series A Convertible Preferred Stock .....	(224)	—	—	—	—
Net loss attributable to common stockholders(2) (3) (4) .....	<u>\$(66,158)</u>	<u>\$(55,878)</u>	<u>\$(73,541)</u>	<u>\$(46,729)</u>	<u>\$(18,124)</u>
Net loss attributable to common stockholders per common share, basic and diluted .....	<u>\$ (1.70)</u>	<u>\$ (1.70)</u>	<u>\$ (2.61)</u>	<u>\$ (1.90)</u>	<u>\$ (1.00)</u>
Weighted average number of shares outstanding, basic and diluted .....	<u>38,989</u>	<u>32,905</u>	<u>28,143</u>	<u>24,659</u>	<u>18,144</u>
	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>
	(In thousands, except per share data)				

**Consolidated Balance Sheet Data:**

Cash, cash equivalents and short-term investments .....	\$ 89,478	\$58,725	\$60,868	\$ 99,139	\$46,418
Total current assets .....	93,322	63,400	63,987	101,593	47,672
Total assets .....	140,080	89,063	93,546	127,966	56,004
Total current liabilities .....	22,105	9,971	16,208	8,611	2,171
Long-term liabilities, less current portion .....	12,729	1,335	1,414	2,651	2,155
Stockholders' equity .....	105,246	77,757	75,925	116,703	51,678

- (1) We recorded charges to operations for the write-off of in-process research and development acquired in our mergers with Aquila Biopharmaceuticals Inc. in November 2000 and with Aronex Pharmaceuticals Inc. in July 2001.
- (2) Prior to our conversion from a limited liability company to a corporation in February 2000, in accordance with federal, state, and local income tax regulations which provide that no income taxes are levied on United States limited liability companies, each member of the limited liability company was individually

responsible for reporting his share of the company's net income or loss. Accordingly, we have not provided for income taxes in our consolidated financial statements for periods before February 2000. Given our history of incurring operating losses, no income tax benefit is recognized in our consolidated financial statements for periods after February 2000 because of a loss before income taxes and the need to recognize a valuation allowance on net deferred tax assets.

- (3) Effective July 1, 2001, we adopted Statement of Financial Accounting Standards (SFAS) No. 141, "Business Combinations" and effective January 1, 2002 adopted SFAS No. 142, "Goodwill and Other Intangibles." As a result, we have ceased amortization of all goodwill beginning January 1, 2002. Had SFAS No. 142 been adopted by us effective January 1, 2000, net loss and net loss attributable to common stockholders and net loss attributable to common stockholder per common share, basic and diluted, would have been as follows (in thousands, except per share data):

	2001	2000
Net loss attributable to common stockholders, as reported.....	\$(73,541)	\$(46,729)
Goodwill and assembled workforce amortization .....	480	39
Pro forma net loss attributable to common stockholders.....	<u>\$(73,061)</u>	<u>\$(46,690)</u>
Net loss attributable to common stockholders per common share, basic and diluted:		
As reported .....	\$ (2.61)	\$ (1.90)
Pro forma .....	(2.60)	(1.89)

- (4) Effective January 1, 2003, we adopted SFAS No. 143 "Accounting for Asset Retirement Obligations." As a result, we have recorded the fair value of an asset retirement obligation of long-lived assets and the corresponding capitalized cost, effective January 1, 2003. Had SFAS No. 143 been in effect for the years presented below, net loss attributable to common stockholders per common share, basic and diluted, would have been as follows (in thousands, except per share data):

	Year Ended December 31,	
	2002	2001
Net loss attributable to common stockholders, as reported.....	\$(55,878)	\$(73,541)
Depreciation expense .....	(43)	(43)
Accretion expense .....	(18)	(17)
Pro forma net loss attributable to common stockholders.....	<u>\$(55,939)</u>	<u>\$(73,601)</u>
Net loss attributable to common stockholders per common share, basic and diluted:		
As reported .....	\$ (1.70)	\$ (2.61)
Pro forma .....	(1.70)	(2.62)

The pro forma liability for asset retirement obligations would have been as follows (in thousands):

	December 31, 2002
Long-term liabilities, less current portion, as reported .....	\$1,335
Asset retirement obligation .....	367
Pro forma long-term liabilities, less current portion .....	<u>\$1,702</u>

## **Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

### **OVERVIEW**

We are currently researching and developing products to treat cancers, infectious diseases and autoimmune disorders. Since our inception in March 1994, our activities have primarily been associated with the development of our heat shock protein technology and our most advanced product candidate, Oncophage. Our business activities have included, product research and development, intellectual property prosecution, manufacturing therapeutic vaccines for clinical trials, regulatory and clinical affairs, corporate finance and development activities, and integration of our acquisitions.

We have incurred significant losses since our inception. As of December 31, 2003, we had an accumulated deficit of \$279,698,000. We continue to finance the majority of our operations through the sale of equity. For the years ended December 31, 2003 and 2002, we have raised through the sale of equity, exercises of stock options and proceeds from our employee stock purchase plan approximately \$92,531,000 and \$56,749,000, respectively. We expect, as we have in the past, to attempt to raise additional funds substantially in advance of depleting our current funds. Satisfying long-term liquidity needs will require the successful commercialization of Oncophage or other products and may require additional capital.

On February 6, 2004, we raised approximately \$50,000,000 through a sale of 5,000,000 shares of our common stock. On February 18, 2004, we raised an additional \$4,000,000 when the underwriters exercised a portion of the over allotment option to acquire 400,000 additional shares.

We expect that we will be able to fund our growing operations and capital expenditures with our current working capital including proceeds from the 2004 offering, through the end of 2005.

To date, we have generated product sales revenues from one product, our feline leukemia vaccine. Our revenues from this product were \$3,465,000, \$2,627,000 and \$1,606,000 for the years ended December 31, 2003, 2002, and 2001 respectively. During the years ended December 31, 2003, 2002 and 2001, we also had research and development revenues of \$985,000, \$784,000, and \$2,949,000 respectively, representing shipments of our adjuvant QS-21 to be used in clinical trials by our partners and grant payments earned.

As discussed in more detail below, we expect our product revenue to decline substantially in the first quarter of 2004 and, if we complete the sale of rights related to this product, we will no longer sell the one product from which we have generated product revenue.

### **Forward-Looking Statements**

This report contains forward-looking statements, including statements regarding the expected settlement of securities litigation, the potential sale of rights to our feline leukemia vaccine, our future development activities, our ability to commercialize products, the timing of future regulatory filings, our future financial results, estimated future payments for clinical trials, future capital expenditures, the impact of litigation, the impact on our investments of future fluctuations in interest rates, and other statements expressed in terms of our expectations, plans or goals. These statements are subject to risks and uncertainties that could cause actual results to differ materially from those indicated in these forward-looking statements. Our ability to settle the securities litigation, for example, will depend on decisions made by plaintiffs, insurance companies, underwriters, and courts, all of which are beyond our control. Our efforts to develop and commercialize our product candidates, and the timing of regulatory filings and analysis of clinical trial data, will depend on, among other matters, our ability to enroll sufficient numbers of patients in clinical trials and to satisfy regulatory agencies that our product candidates are safe, effective and adequately characterized, which may require considerable information and effort and still be unsuccessful. Levels of future expenditures will depend on the activities we

are required to undertake to satisfy regulatory requirements, the timing of our efforts, and inflationary trends. General financial market conditions will impact the value of our investments. Our business is subject to substantial risk. Risks and uncertainties, including the factors identified under "Factors That May Impact Future Results" will substantially determine whether we are successful and whether the results indicated by the forward-looking statements occur. We caution investors not to place considerable reliance on the forward-looking statements contained in this report. These statements speak only as of the date of this report, and we undertake no obligation to update or revise the statements.

## **Historical Results of Operations**

### ***Year Ended December 31, 2003 Compared To The Year Ended December 31, 2002***

**Revenue:** We generated \$3,465,000 and \$2,627,000 of product revenue during the years ended December 31, 2003 and 2002, respectively. Product revenue consist of sales of our feline leukemia vaccine to our marketing partner Virbac S.A., a French company that has exclusive, perpetual, worldwide rights to market the product. The supply agreement was up for renewal in July 2002, at which point we began to supply product to Virbac S.A. through month-to-month supply agreements. We are currently negotiating for the possible divestiture of our manufacturing and certain intellectual property rights to the feline leukemia vaccine. Until such an agreement has been executed, there are no assurances that the sale of this technology will occur. In the event that this sale is completed, we will no longer derive revenues from product sales. In addition to our product sales, we had \$985,000 and \$784,000 of research and development revenue during the years ended December 31, 2003 and 2002, respectively. Revenues from research and development activities include shipments of adjuvant QS-21 to be used in clinical trials by our partners and grant payments earned. We expect revenue from shipments of QS-21 to be lower in 2004 than in 2003.

**Cost of Sales:** Cost of sales, which is related entirely to product revenue, was \$1,942,000 and \$1,337,000 for the years ended December 31, 2003 and 2002, respectively. For the years ended December 31, 2003 and 2002, cost of sales was 56% and 51% respectively, of product sales. This increase is related to the decreased utilization of our FeLV manufacturing facility, which increased our overhead allocation to cost of sales.

**Research and Development:** Research and development expenses include the costs associated with our internal research and development activities including, salaries and benefits, occupancy costs, clinical manufacturing costs, related administrative costs, and research and development conducted for us by outside advisors, such as sponsored university-based research partners, including the University of Connecticut where we sponsor research, and clinical research organizations. In addition, research and development expenses include the cost of clinical material shipped to our research partners and expenses related to grant revenue. Research and development expense increased 21% to \$48,527,000 for the year ended December 31, 2003 from \$39,983,000 for the year ended December 31, 2002. This increase reflects the continued advancement of our Oncophage Phase III clinical trials in renal cell carcinoma and melanoma, including increased monitoring of these Phase III trials during the clinical hold, increased costs due to the interim analysis of our Phase III trial in renal cell carcinoma, and other heat shock protein related research. Expenses related to our Oncophage clinical trials increased \$4,426,000 for the year ended December 31, 2003 over the same period in 2002. Also adding to the increase is a \$1,327,000 depreciation charge for machinery and equipment related to the exit from our Woburn, Massachusetts facility. In addition, salary and personnel related expenses have increased \$1,684,000 during the year ended December 31, 2003 over the same period of 2002. This increase in salary expense has been due to our hiring of personnel to assist with our expanding research activities. Our other research and development expenses increased by \$1,107,000.

**General and Administrative:** General and administrative expenses consist primarily of personnel compensation, office expenses and professional fees. General and administrative expenses increased 12% to

\$21,717,000 for the year ended December 31, 2003 from \$19,467,000 for the year ended December 31, 2002. The increase was primarily due to a \$986,000 increase in rent expense due to a settlement with our Woburn facility landlord, and rent related to our Lexington, Massachusetts facility. In addition, advisory services and employee training expenses increased \$819,000 primarily to support our expanding market development operations. Also adding to the increase in general and administrative expenses is the \$135,000 increase in our directors and officers insurance premium. The remainder of our general and administrative expenses increased \$310,000.

*Non-operating Income:* Non-operating income consists of rental income earned on the subleases of a number of our facilities. For the year ended December 31, 2003, we earned \$883,000 of rental income, an increase of \$611,000 over the same period for 2002. The increase in rental income is primarily attributed to a portion of our Framingham, Massachusetts facility being subleased for the entirety of 2003, as compared to six months during the 2002.

*Interest Income:* Interest income decreased 27% to \$1,166,000 for the year ended December 31, 2003 from \$1,590,000 for the year ended December 31, 2002. This decrease is attributable to declining interest rates during 2003. Our average interest rate decreased from 1.9% for the year ended December 31, 2002, to 1.2% for the year ended December 31, 2003.

*Interest expense:* Interest expense decreased 32% to \$247,000 for the year ended December 31, 2003 from \$365,000 for the year ended December 31, 2002. The decrease is attributable to our reduced debt balance for the majority of the 2003 fiscal year. The majority of our debt balance at December 31, 2003 corresponds with the build-out of the Lexington facility, which did not occur until the second half of 2003.

#### ***Year Ended December 31, 2002 Compared To The Year Ended December 31, 2001***

*Revenue:* We generated \$2,627,000 and \$1,606,000 of product revenue during the years ended December 31, 2002 and 2001, respectively. We had \$784,000 and \$2,949,000 of research and development revenue during the years ended December 31, 2002 and 2001, respectively. Product revenues consist of sales of our feline leukemia vaccine through a supply agreement with our marketing partner Virbac S.A., a French company that has exclusive, perpetual, worldwide rights to market the product. The supply agreement was up for renewal in July 2002, at which point we began to supply product to Virbac S.A. through month-to-month supply agreements. Revenues from research and development activities include shipments of adjuvant QS-21 to be used in clinical trials by our partners and grant payments earned, and in 2001, milestones earned. Under the terms of our license agreement with Neuralab Limited, a wholly owned subsidiary of Elan Corporation, plc, we received a \$1,000,000 milestone payment in 2001 related to the initiation of a Phase IIA clinical trial of a product using QS-21. In 2001, our adjuvant was shipped for use in this trial. In March 2002, Elan halted the dosing of patients with its product after several patients experienced significant adverse effects and no further shipments were made during 2002.

*Cost of Sales:* Cost of sales, which is related entirely to product revenue, was \$1,337,000 and \$1,064,000 for the years ended December 31, 2002 and 2001, respectively, representing 66% and 51% respectively, of product sales. Cost of sales in 2001 partially represented the cost of inventory acquired in our merger with Aquila Biopharmaceuticals, Inc. that was adjusted to its fair value as a result of the application of purchase accounting rules.

*Research and Development:* Research and development expenses include the costs associated with our internal research and development activities including, salaries and benefits, occupancy costs, clinical manufacturing costs, related administrative costs, and research and development conducted for us by outside advisors, such as sponsored university-based research partners, including the University of Connecticut where we sponsor research, and clinical research organizations as well as expenses related to grant revenue. Research

and development expense increased 28% to \$39,983,000 for the year ended December 31, 2002 from \$31,357,000 for the year ended December 31, 2001. The increase was primarily due to the costs associated with our Oncophage clinical trials that increased \$9,106,000 for the year ended December 31, 2002 over the same period in 2001 particularly due to the advancement of our Phase III clinical trial in renal cell carcinoma, a \$492,000 increase in depreciation expense due to the non-renewal of our current lease of our Woburn, Massachusetts manufacturing facility, and \$284,000 due to the write-off of obsolete software. These increases are partially offset by a decrease in the non-cash charge for options granted and earned by outside advisors, directors and employees to \$621,000 for the year ended December 31, 2002 from \$783,000 for the year ended December 31, 2001, the decrease in research production costs of \$714,000, and a \$380,000 net decrease in other ongoing development activities during the year ended December 31, 2002 over the year ended December 31, 2001.

*General and Administrative:* General and administrative expenses consist primarily of personnel compensation, office expenses and professional fees. General and administrative expenses increased 41% to \$19,467,000 for the year ended December 31, 2002 from \$13,762,000 for the year ended December 31, 2001. The increase was primarily due to the increase in payroll related expenses for employees to support our expanded business operations which increased costs by \$2,933,000, increased legal fees of \$1,375,000, Aronex related administrative expenses of \$685,000, \$481,000 for long-term investment impairment charges, and other net increases in our general and administrative expenses, which were \$457,000 higher for the year ended December 31, 2002 over the year ended December 31, 2001. These increases were partially offset by the decrease in the non-cash charge for options granted and earned by outside advisors, directors, and employees to \$214,000 for the year ended December 31, 2002 from \$440,000 for the year ended December 31, 2001.

*Acquired In-Process Research and Development:* Acquired in-process research and development of \$34,596,000 in 2001 was a non-cash charge related to our merger with Aronex Pharmaceuticals. A component of the total purchase price of the merger was allocated to incomplete acquired technologies under development but not yet technologically feasible or commercialized and which had no alternative future uses, and were expensed at the acquisition date. At the date of the acquisition, none of the products under development by Aronex Pharmaceuticals that were included in our in-process research and development charge had achieved technological feasibility and none were being sold on the market. There still remained substantial risks and significant uncertainty concerning the remaining course of technical development. We need to conduct extensive additional research, preclinical and clinical testing of these products, and obtain regulatory approval, prior to any commercialization. Because of the great uncertainty associated with these issues and the remaining effort associated with development of these products, the development projects had not established technological feasibility at the acquisition date. Further, these partially completed products had no alternative future uses at the valuation date if the contemplated programs were to fail, as the technology was highly specialized to the targeted products.

The acquired in-process research and development charge and related accounting is further described in Note 3 to our consolidated financial statements included in this annual report.

*Non-operating Income:* Non-operating income was \$272,000 for the year ended December 31, 2002 and represents rental income earned on the sublease of our Framingham, Massachusetts facility.

*Interest Income:* Interest income decreased 53% to \$1,590,000 for the year ended December 31, 2002 from \$3,374,000 for the year ended December 31, 2001. This decrease is attributable to declining interest rates during 2002. Our average interest rate decreased from 3.9% for the year ended December 31, 2001, to 1.9% for the year ended December 31, 2002.

*Interest Expense:* Interest expense decreased 47% to \$365,000 for the year ended December 31, 2002 from \$690,000 for the year ended December 31, 2001. The decrease is attributable to our reduced debt balance during the year ended December 31, 2002.

## Research and Development Programs

Prior to 2002, we did not track costs on a per project basis, and therefore have estimated the allocation of our total research and development costs to each of our three largest research and development programs. These research and development programs contain our four lead product candidates, Oncophage®, AG-858, AG-702/707, and Aroplatin™, as indicated in the following table.

Research and Development Program	Lead Product	Year Ended December 31,				
		2003	2002	2001	2000	Prior to 2000
Heat Shock Proteins for Cancer	Oncophage & AG-858	\$41,335,000	\$32,367,000	\$23,277,000	\$15,290,000	\$21,508,000
Heat Shock Proteins for Infectious Diseases . . . . .	AG-702/707	2,447,000	1,301,000	735,000	866,000	1,219,000
Liposomal Cancer Treatments*	Aroplatin	1,263,000	2,149,000	1,442,000	—	—
Other Research and Development Programs . . . . .		3,482,000	4,166,000	5,903,000	1,419,000	1,171,000
Total Research and Development Expenses . . . . .		<u>\$48,527,000</u>	<u>\$39,983,000</u>	<u>\$31,357,000</u>	<u>\$17,575,000</u>	<u>\$23,898,000</u>

\* Prior to 2001 costs were incurred by Aronex Pharmaceuticals, a company we acquired in July 2001

We have allocated direct and indirect costs to each program based on certain assumptions and our review of the status of each program, payroll related expenses and other overhead costs based on estimated usage of each by each program. Each of our lead product candidates is in various stages of completion as described below. As we expand our clinical studies, we will enter into additional agreements. Significant additional expenditures will be required if we complete our clinical trials, start new trials, apply for regulatory approvals, continue development of our technologies, expand our operations and bring our products to market. The eventual total cost of each clinical trial is dependent on a number of uncertainties such as trial design, the length of the trial, the number of clinical sites and the number of patients. The process of obtaining and maintaining regulatory approvals for new therapeutic products is lengthy, expensive and uncertain. Because the successful development of our most advanced product candidate, Oncophage, is uncertain, and because AG-858, AG-702/707, and Aroplatin are in early-stage clinical development, we are unable to estimate the cost of completing our research and development programs, the timing of bringing such programs to market and, therefore, when material cash inflows could commence.

### *Oncophage*

We started enrolling patients in our first clinical trial studying Oncophage in November 1997. To date, over 700 patients have been treated with Oncophage in our various clinical trials. We have ongoing Phase I and Phase II trials in several types of cancer as well as a Phase III trial for renal cell carcinoma and a Phase III trial for melanoma.

On September 3, 2003, we announced that the United States Food and Drug Administration (FDA) placed our Phase III Oncophage clinical trials on partial clinical hold. With FDA approval, we continued to treat and monitor patients that were already enrolled in the trials as of that date. Furthermore, we continued to enroll and treat patients in our ongoing Phase I and Phase II clinical trials of Oncophage, as well as initiate new Phase I and Phase II trials. On October 23, 2003 we submitted to the FDA additional



Oncophage product characterization information, and on November 23, 2003 the agency lifted the partial clinical hold. On December 22, 2003, we announced the result of the planned interim analysis of the data from our ongoing Phase III trial of Oncophage in renal cell carcinoma. Based on its review of the safety data, efficacy data, and other information regarding the trial, the independent Data Monitoring Committee for the trial recommended that the trial proceed as planned and did not require that we change the patient accrual goals for a successful analysis of the randomized Phase III trial. At the interim analysis, the Data Monitoring Committee also declared the design and conduct of the trial sound and raised no safety concerns.

The final analysis for C-100-12 will be triggered once a pre-specified number of events occur. An event is defined as a recurrence of a patient's renal cell carcinoma or a death of a patient. Events are reviewed and confirmed, on a blinded basis, by an independent Clinical Events Committee comprised of an expert radiologist and an expert oncologist. Based on the overall trend of events in C-100-12 to date, we believe that the earliest the final analysis for this trial will be triggered is in early 2005. If the efficacy data demonstrates a statistically significant improvement of the primary endpoint for patients treated with Oncophage, and if the FDA accepts the data from C-100-12 as being pivotal and sufficient to support product registration, we would expect to file a biologics license application, or BLA, within six months after conducting the final analysis.

During 2004, we plan to initiate a second Phase III, multicenter, international trial for renal cell carcinoma. We intend to use this additional Phase III trial to support the potential accelerated approval of Oncophage based on data from our currently ongoing C-100-12 Phase III trial in renal cell carcinoma. However, we have not had detailed discussions or formally asked the FDA if our overall product approval strategy for Oncophage in renal cell carcinoma is acceptable. Additionally, the FDA has not reviewed the protocol for our planned second Phase III trial in renal cell carcinoma. We plan to request a formal meeting with the FDA during the first half of 2004 to review and seek guidance on our product approval strategy for Oncophage in renal cell carcinoma.

We expect to complete enrollment of our ongoing Phase III trial in melanoma, Study C-100-21 during 2004. We have a meeting scheduled with the Data Monitoring Committee in early 2004 to review the safety and conduct of C-100-21 in melanoma. While this meeting is not an interim analysis of the efficacy data from this trial, we may need to make changes in the patient enrollment target or the design of this trial subsequent to the completion of this Data Monitoring Committee meeting. Changes in this regard would likely prevent us from completing enrollment of C-100-21 during 2004. We expect that, based on the current design of C-100-21, the final analysis of the data from this trial would occur 8 to 12 months subsequent to completion of enrollment.

During 2004, we also plan to initiate a second Phase III, multicenter, international trial for melanoma. We have not had detailed discussions or formally asked the FDA if our overall product approval strategy for Oncophage in melanoma is acceptable. Additionally, the FDA has not reviewed the protocol for our planned second Phase III trial in melanoma. We plan to request a formal meeting with the FDA during 2004 to review and provide guidance on our product approval strategy for Oncophage in melanoma.

During 2004 we also expect to initiate a Phase I/II trial of Oncophage in lung cancer and a Phase II trial in breast cancer.

As our most advanced product candidate, Oncophage, is a novel cancer therapeutic vaccine that is personalized for each patient, it may experience a long regulatory review process and high development costs either of which could delay or prevent our commercialization efforts. For additional information regarding regulatory risks and uncertainties, please read the factors identified under "Factors That May Impact Future Results."

#### *AG-858*

In December 2002, interim data was reported from a pilot Phase I clinical trial conducted at the University of Connecticut School of Medicine using HSPPC-70 for the treatment of chronic myelogenous leukemia, or CML. In April 2003, we initiated a Phase II trial in CML of AG-858 in combination with Gleevec. We expect to complete enrollment in this trial near the middle of 2004 and to release the data from this trial approximately six to twelve months after completion of enrollment.

#### *AG-702/707*

We initiated a pilot Phase I clinical trial of AG-702 in the fourth quarter of 2001 and we expect to complete enrollment of this trial in early 2004. AG-702 is a vaccine formulation containing one antigen, or target, of the herpes virus. AG-707 is a vaccine formulation containing over 30 HSV-2 antigens. We expect to file an IND for AG-707 for the treatment of genital herpes in the first half of 2004 and, assuming allowance of the IND by the FDA, we would expect to begin enrolling patients shortly thereafter.

#### *Aroplatin*

We initiated Phase II clinical trials of Aroplatin for colorectal cancer and other solid tumors in 2002 and released data from the colorectal cancer trial in the third quarter of 2003. We completed enrollment of the first cohort of patients in both trials and at this time do not intend to enroll additional patients. We are currently conducting preclinical experiments with Aroplatin to determine how the formulation of Aroplatin could be improved. Subject to the results of these experiments, we may launch a series of further preclinical experiments to support future clinical trials with an improved formulation or we may make the decision to suspend or delay the current development of Aroplatin. We expect to complete our initial preclinical experiments by the middle of 2004.

#### *ATRA-IV*

ATRA-IV is a liposomal formulation of ATRA, or all-*trans*-retinoic acid, that can be given intravenously. ATRA is a derivative of retinol, otherwise known as vitamin A. We acquired ATRA-IV, formerly known as ATRAGEN, through our acquisition of Aronex Pharmaceuticals, Inc. in July 2001. We have slowed the development of ATRA-IV and, although the product is being studied by certain third-party investigators, we only have a limited amount of resources allocated to this product program at this time.

#### **Liquidity and Capital Resources**

We have incurred annual operating losses since inception, and, as of December 31, 2003, we had an accumulated deficit of \$279,698,000. We expect to incur increasing and significant losses over the next several years as we continue our clinical trials, apply for regulatory approvals, continue development of our technologies, and expand our operations. Since our inception, we have financed our operations primarily through the sale of equity, interest income earned on cash, cash equivalents, and short-term investment balances and debt provided through a credit line secured by some of our manufacturing and laboratory assets. From our inception through December 31, 2003, we raised aggregate net proceeds of \$296,273,000 through the sale of equity, the exercise of stock options and warrants and proceeds from our employee stock purchase plan, and borrowed \$20,523,000 under our two credit facilities totaling \$22,100,000. On July 17, 2003, we entered into a \$17,100,000 debt facility pursuant to which we have borrowed \$17,042,000 to finance the build-out of our Lexington, Massachusetts facility. We also assumed term loan agreements and a convertible note payable with a combined outstanding balance, at the respective merger dates, of \$6,159,000 in connection with the acquisitions of Aquila Biopharmaceuticals and Aronex Pharmaceuticals. At December 31, 2003, we have

debt outstanding of approximately \$15,868,000. In the fall of 2001, we filed a Form S-3 shelf registration statement with the Securities and Exchange Commission for the registration and potential issuance of up to \$100 million of our securities. In January 2002, we sold 4,000,000 shares of our common stock for net proceeds of \$56,139,000. In the summer of 2002, we filed another registration statement to return the aggregate amount of securities registered for potential issuance back to \$100 million. In January 2003, we sold 6,250,000 shares of our common stock for net proceeds of approximately \$59,602,000. In April 2003, we filed a registration statement for the potential issuance of up to \$100 million of registered securities. In September 2003, in a private placement, we sold 31,620 shares of our newly created Series A Convertible Preferred Stock for net proceeds of \$31,606,000. In February 2004, we sold 5,400,000 shares of our common stock for net proceeds of approximately \$54,000,000.

We expect that we will be able to fund our capital expenditures and growing operations with our current working capital including proceeds from the 2004 offering, through the end of 2005. In order to fund our needs subsequently, we will need to raise additional money and may be able to do so by: (i) completing securities offerings, (ii) out-licensing technologies or products to one or more corporate partners, (iii) renegotiating license agreements with current corporate partners, (iv) completing an outright sale of assets that are not core to our business strategy or (v) securing additional debt financing. Our ability to successfully enter into any such arrangements is uncertain and if funds are not available, or not available on terms acceptable to us, we may be required to revise our planned clinical trials and other development activities and capital expenditure requirements. We expect to attempt to raise additional funds substantially in advance of depleting our current funds; however, we may not be able to raise funds or raise amounts sufficient to meet the long term needs of the business. Satisfying long-term liquidity needs will require the successful commercialization of Oncophage or other products and, at this time, we cannot estimate when that will occur, and the process may require additional capital as discussed above. Please see the "Forward-Looking Statements" section and the factors highlighted in the "Factors That May Impact Future Results" section.

Our future cash requirements include, but are not limited to, supporting our clinical trial efforts and continuing our other research and development programs. Since inception we have entered into various agreements with institutions and clinical research organizations to conduct and monitor our current clinical studies. Under these agreements, subject to the enrollment of patients and performance by the applicable institution of certain services, we have estimated our payments to be \$46,342,000 over the term of the studies. Through December 31, 2003, approximately \$24,294,000 has been expensed as research and development expenses in the accompanying consolidated statements of operations and \$20,170,000 has been paid related to these clinical studies. The timing of our expense recognition and future payments related to these agreements are subject to the enrollment of patients and performance by the applicable institution of certain services. As we expand our clinical studies we plan to enter into additional agreements. We anticipate significant additional expenditures will be required to complete our clinical trials, apply for regulatory approvals, continue development of our technologies and expand our operations and bring our products to market. In addition, we have entered into sponsored research agreements related to our products that require payments of approximately \$9,878,000, of which \$2,083,000 has been paid through December 31, 2003. Part of our strategy is to develop and commercialize some of our product candidates by continuing our existing collaborative arrangements with academic and corporate partners and licensees, and by entering into new collaborations. As a result of our collaborative agreements, we will not completely control the efforts to attempt to bring those product candidates to market. We have various agreements with corporate partners that allow the use of our QS-21 adjuvant in numerous vaccines. These agreements grant exclusive worldwide rights in some fields of use, and co-exclusive or non-exclusive rights in others. The agreements call for royalties to be paid to us by the partner on its future sales of licensed vaccines that include QS-21, which may or may not be achieved.

Our cash, cash equivalents and short-term investments at December 31, 2003 were \$89,478,000, an increase of \$30,753,000 from December 31, 2002. During the year ended December 31, 2003, we used cash primarily to finance our research operations, including our Oncophage clinical trials. Net cash used in operating activities for the years ended December 31, 2003 and 2002 was \$51,188,000 and \$50,834,000, respectively. The increase resulted primarily from the increase in the activity of our Oncophage clinical trials, on-going development activities and the general expansion of our research and administrative operations. As we develop our technologies and further our clinical trial programs we expect to increase our spending. Our future ability to generate cash from operations will depend on achieving regulatory approval of our products, market acceptance of such products, achieving benchmarks as defined in existing collaborative agreements, and our ability to enter into new collaborations. Please see the "Forward-Looking Statements" section and the factors highlighted in the "Factors That May Impact Future Results" section.

Net cash used in investing activities for the year ended December 31, 2003 was \$32,531,000 as compared to \$28,172,000 for the year ended December 31, 2002. During the year ended December 31, 2003 we invested \$57,229,000 of our available cash in short-term investments and received proceeds from such investments of \$50,507,000. Additionally, our investment in the purchase of equipment, furniture and fixtures increased \$16,229,000 to \$18,537,000 for the year ended December 31, 2003. This increase in investment is primarily due to the build-out of our Lexington, Massachusetts facility. We anticipate additional capital expenditures of up to \$5,000,000 during 2004. In addition, a \$750,000 contribution was made to Applied Genomic Technology Capital Fund (AGTC), a limited partnership, during the year ended December 31, 2003. Our remaining commitment to AGTC on December 31, 2003 is \$1,125,000 with contributions made as requested by the general partner. We have also received a \$2,000,000 refundable deposit for the potential divestiture of our manufacturing and certain intellectual property rights to the feline leukemia vaccine.

Net cash provided by financing activities was \$107,800,000 for the year ended December 31, 2003 as compared to \$51,268,000 for the year ended December 31, 2002. Since inception, our primary source of financing has been from equity sales. During the years ended December 31, 2003 and 2002, sales of equity, exercises of stock options and proceeds from our employee stock purchase plan totaled approximately \$92,531,000 and \$56,749,000, respectively. These proceeds will continue to fund our research and product development activities. As noted above, in July 2003 we entered into a \$17,100,000 debt facility to finance the first phase of build-out of our Lexington facility. Through December 31, 2003, we have borrowed \$17,042,000 under this facility. Specific assets, including leasehold improvements, which they finance, and a cash security deposit of \$8,521,000 secure the loans drawn on the credit facility. At December 31, 2003, we had a \$15,722,000 debt balance under this credit facility.

The table below summarizes our contractual obligations as of December 31, 2003:

Contractual Obligations	Total	Payments due by period			
		Less than 1 Year	1-3 years	3-5 Years	More than 5 Years
Long-Term Debt .....	\$15,868,000	\$ 5,623,000	\$10,201,000	\$ 44,000	\$ —
Operating Leases .....	27,452,000	3,297,000	6,901,000	6,262,000	10,992,000
Research Agreement .....	6,750,000	1,350,000	2,700,000	2,700,000	—
<b>TOTAL .....</b>	<b><u>\$50,070,000</u></b>	<b><u>\$10,270,000</u></b>	<b><u>\$19,802,000</u></b>	<b><u>\$9,006,000</u></b>	<b><u>\$10,992,000</u></b>

Effective July 19, 2002 we sublet part of our Framingham manufacturing, research and development, and office space to GTC Biotherapeutics, Inc and we have leased related leasehold improvements and equipment under agreements which expire in December 31, 2006. GTC Biotherapeutics has an option to extend this lease until September 2010. Under the terms of our original lease, we are obligated to pay our landlord

approximately 7% of our rental income. In addition, we sublet part of our Texas and New York facilities to a number of small private companies under agreements that expire in 2008 and 2004 respectively. We are contractually entitled to receive rental income of \$886,000 in 2004; \$833,000 in 2005; \$911,000 in 2006; \$238,000 in 2007 and \$20,000 in 2008; the collection of this income, however, is subject to uncertainty.

We are currently involved in certain legal proceedings as detailed in Item 3 above and Note 16 to our consolidated financial statements. We do not believe these proceedings will have a material adverse effect on our consolidated financial position, results of operations or liquidity.

### **Related Parties**

As of December 31, 2003, we had invested \$1,875,000 in a limited partnership, AGTC. Our total capital commitment to AGTC is \$3,000,000. One of our directors, Noubar Afeyan, Ph.D., is the Chairman and Senior Managing Director and CEO of a partnership of funds that include the general partner of AGTC. In addition, Garo H. Armen, Ph.D., our chairman and chief executive officer, is a director of NewcoGen Group Inc. For details refer to Note 5 to our consolidated financial statements.

As detailed in Note 11 to our consolidated financial statements our predecessor company, Founder Holdings, Inc., which, indirectly, remains a significant shareholder, approved a stock option plan pursuant to which our officers, directors, employees and consultants may be granted options in the predecessor company. In accordance with accounting principles generally accepted in the United States of America, options granted under this plan are accounted for as compensation expense by us and treated as a contribution to stockholders' equity.

At December 31, 2003 and 2002, Founder Holding, Inc. and Antigenics Holdings L.L.C. were indebted to us for approximately \$0 and \$17,000, respectively, for certain expenses paid by us on their behalf. Please refer to Note 13 to our consolidated financial statements.

We currently have a QS-21 license and supply agreement with Neuralab Limited, a wholly owned subsidiary of Elan Corporation, plc, for use of QS-21 with an antigen in the field of Alzheimer's disease. Garo H. Armen, Ph.D., our Chairman and Chief Executive Officer, is the non-executive Chairman of Elan and a nominal employee of a different wholly-owned subsidiary of Elan. For the year ended December 31, 2003, no revenues were earned under these agreements and accordingly, at December 31, 2003, we had no amounts due to us under these agreements.

In March 1995, we entered into a consulting agreement with Dr. Pramod Srivastava, our scientific founder and one of our directors. This agreement expires in March 2005 but will be automatically extended for additional one-year periods unless either party decides not to extend the agreement. In 2003, we paid Dr. Srivastava a cash bonus of \$100,000 and granted him options to purchase shares of our common stock for services performed in 2002.

In February 1998 we entered into a research agreement with the University of Connecticut Health Center (UConn) to fund research in Dr. Pramod Srivastava's laboratory at UConn. Dr. Srivastava is a member of the faculty of the University of Connecticut School of Medicine and one of our directors. The research agreement was amended on December 30, 2003, to extend the term to December 31, 2008 and calls for payments to UConn totaling a minimum of \$6,750,000, payable quarterly at the rate of \$337,500 (contingent on the continuing employment of Dr. Srivastava by UConn). In return, we have an option to obtain an exclusive license to new inventions (as defined in the research agreement) subject to our payment to UConn of royalties at varying rates upon commercialization of a product utilizing technology discovered under the research agreement.

## **Factors That May Impact Future Results**

Our future operating results could differ materially from the results described above due to the risks and uncertainties described below.

### **Risks Related to our Business**

*If we incur operating losses for longer than we expect, we may be unable to continue our operations.*

From our inception through December 31, 2003, we have generated net losses totaling \$279.7 million. Our net losses for the year ended December 31, 2003, 2002, and 2001 were \$65.9 million, \$55.9 million, and \$73.5 million, respectively. We expect to incur increasing and significant losses over the next several years as we continue our clinical trials, apply for regulatory approvals, continue development of our technologies, and expand our operations. Phase III clinical trials are particularly expensive to conduct and we plan to initiate two new Phase III clinical trials during 2004 — one in renal cell carcinoma and one in melanoma. Furthermore, our ability to generate cash from operations is dependent on when we will be able to commercialize our products and, we expect that the earliest we may be able to commercialize Oncophage would be in late 2005. If we incur operating losses for longer than we expect, we may be unable to continue our operations.

*If we fail to obtain the capital necessary to fund our operations, we will be unable to advance our development programs and complete our clinical trials.*

On December 31, 2003, we had approximately \$89.5 million in cash, cash equivalents and short-term investments. In February 2004, we sold 5,400,000 shares of our common stock, raising net proceeds of approximately \$54 million. With our current capital and the net proceeds from this offering, we expect that we could fund our development programs, clinical trials, and other operating expenses through the end of 2005. We plan to raise additional funds prior to that time. For the year ended December 31, 2003, the sum of our average monthly cash used in operating activities plus our average monthly capital expenditures was approximately \$5.8 million. Total capital expenditures for the year ended December 31, 2003 were \$18.5 million. We anticipate additional capital expenditures of up to \$5,000,000 during 2004. Since our inception, we have financed our operations primarily through the sale of equity. In order to finance our future operations, we will be required to raise additional funds in the capital markets, through arrangements with corporate partners, or from other sources. Additional financing, however, may not be available on favorable terms or at all. If we are unable to raise additional funds when we need them, we may be required to delay, reduce or eliminate some or all of our development programs and some or all of our clinical trials, including the development programs and clinical trials supporting our lead cancer product candidate, Oncophage. We also may be forced to license technologies to others under agreements that allocate to third parties substantial portions of the potential value of these technologies.

*The United States Food and Drug Administration may not consider our current Phase III trials of Oncophage, our most advanced product candidate, sufficient for registration, and this may significantly delay or prevent the commercial launch of Oncophage.*

On September 3, 2003, the FDA placed our Phase III Oncophage clinical trials in renal cell carcinoma and in melanoma on partial clinical hold. The FDA's written correspondence instituting the partial clinical hold indicated that Oncophage was not sufficiently characterized and that based on the then current level of Oncophage product characterization information provided to the FDA, the FDA would refuse the filing of a biologics license application, or BLA. On October 24, 2003, we submitted additional Oncophage product characterization information to the FDA, and on November 24, 2003, we announced that the FDA had lifted the partial clinical hold.

Even though the FDA has lifted the partial clinical hold, because we initiated our Phase III Oncophage trials prior to sufficiently characterizing the product, the FDA may not consider our current Oncophage Phase III trials to be well controlled and therefore may not consider them to be pivotal trials, thereby preventing us from using data from these trials as the primary basis for a BLA filing. In this event, we may be required to enroll additional patients in our current Phase III trials or to complete additional Phase III trials in both renal cell carcinoma and melanoma to support BLA filings. This could significantly delay or prevent the commercial launch of Oncophage and negatively impact our financial prospects.

***If the results from our first Phase III trials on Oncophage do not demonstrate efficacy, our commercial launch of Oncophage will be delayed or prevented and our business prospects will be substantially diminished.***

In December 2003, we announced that the Data Monitoring Committee, or DMC, had convened as scheduled for the interim analysis of our ongoing Phase III clinical trial of Oncophage in the treatment of renal cell carcinoma. The DMC recommended that the trial proceed as planned and did not require that we change patient accrual goals. These recommendations do not assure either that the trial will demonstrate statistically significant results or that the trial will prove adequate to support approval of Oncophage for commercialization in the treatment of patients with renal cell carcinoma. The final data from the trial may not sufficiently demonstrate levels of efficacy and safety necessary to support marketing approval by the FDA and other regulatory agencies. Data from clinical trials are subject to varying interpretations.

We have a meeting scheduled with the DMC during the first quarter of 2004 to review the safety and conduct of our Phase III melanoma trial of Oncophage. While this meeting is not an interim analysis of the efficacy data from this trial, we may need to make changes in the patient enrollment target or the design of this trial subsequent to the completion of this DMC meeting. Any such changes in this regard might substantially delay our efforts to commercialize Oncophage for patients with melanoma.

Inconclusive or negative final data from the current Phase III renal cell carcinoma trial or interim or final data from the current Phase III melanoma trial would have a significant negative impact on our prospects and likely would cause a sharp sell-off of our securities. If the results in our Phase III trials are not sufficiently positive to garner approval from regulatory agencies, we may abandon development of Oncophage for the applicable indication or we may expend considerable resources repeating the trials or starting different trials, which would reduce prospects for generating revenue in the near term.

***The regulatory approval process is uncertain, time-consuming and expensive.***

The process of obtaining and maintaining regulatory approvals for new therapeutic products is lengthy, expensive and uncertain. It also can vary substantially, based on the type, complexity and novelty of the product. Our most advanced product candidate, Oncophage, is a novel cancer therapeutic vaccine that is personalized for each patient. To date, the FDA has not approved any cancer therapeutic vaccines for commercial sale, and foreign regulatory agencies have approved only a limited number. Both the FDA and foreign regulatory agencies have relatively little experience in reviewing personalized medicine therapies, and the partial clinical hold that the FDA had placed on our current Phase III Oncophage clinical trials primarily related to product characterization issues partially associated with the personalized nature of Oncophage. Oncophage may experience a long regulatory review process and high development costs, either of which could delay or prevent our commercialization efforts.

To obtain regulatory approvals, we must, among other requirements, complete carefully controlled and well-designed clinical trials demonstrating that a particular product candidate is safe and effective for the applicable disease. Several biotechnology companies have failed to obtain regulatory approvals because

regulatory agencies were not satisfied with the structure or conduct of clinical trials or the ability to interpret the data from the trials; similar problems could delay or prevent us from obtaining approvals. Furthermore, we do not have a determination by the FDA that these trials are pivotal and can form the primary basis of an efficacy claim in a BLA. We plan to initiate an additional Phase III trial for Oncophage during 2004 in renal cell carcinoma. We intend to use this Phase III trial to support a potential accelerated approval filing from our current Phase III trial in renal cell carcinoma. We have not had detailed discussions with the FDA regarding our product approval strategy for Oncophage in renal cell carcinoma, however, and the FDA has not yet reviewed the protocol for this new planned Phase III Oncophage trial. During 2004, we also intend to initiate a second Phase III trial in melanoma in collaboration with a large cooperative group in Europe. We have not had detailed discussions with the FDA regarding our product approval strategy for Oncophage in melanoma and the FDA has not yet reviewed the protocol for this planned Phase III trial in melanoma. The FDA may not consider these new trials to be registrational trials in our current Phase III development program and may disagree with our overall strategy to seek accelerated approval. In this event, the potential commercial launch of Oncophage could be significantly delayed, which would likely have a materially negative impact on our ability to generate revenue and our need for additional funding.

The timing and success of a clinical trial is dependent on enrolling sufficient patients in a timely manner, avoiding adverse patient reactions, and demonstrating in a statistically significant manner the safety and efficacy of the product candidates. Because we rely on third-party clinical investigators and contract research organizations to conduct our clinical trials, we may encounter delays outside our control, particularly if our relationships with any third-party clinical investigators or contract research organizations are adversarial. The timing and success of our Phase III trials, in particular, are also dependent on the FDA and other regulatory agencies accepting each trial's protocol, statistical analysis plan, product characterization tests and clinical data. If we are unable to satisfy the FDA and other regulatory agencies with such matters, including the specific matters noted above, and/or our current Phase III trials yield inconclusive or negative results, we would likely be required to modify or to expand the scope of our Phase III studies or conduct additional Phase III studies to support BLA filings, including additional studies beyond the two new Phase III trials in renal cell carcinoma and melanoma that we plan to initiate during 2004. In that event, the launch of Oncophage, if not prevented, would likely be delayed and the costs of developing Oncophage would increase. In addition, the FDA may request additional information or data to which we do not have access. Delays in our ability to respond to such a FDA request would delay, and failure to adequately address all FDA concerns would prevent, our commercialization efforts.

In addition, we, or the FDA, might further delay or halt our clinical trials for various reasons, including but not limited to:

- we may fail to comply with extensive FDA regulations;
- a product candidate may not appear to be more effective than current therapies;
- a product candidate may have unforeseen or significant adverse side effects or other safety issues;
- the time required to determine whether a product candidate is effective may be longer than expected;
- we may be unable to adequately follow or evaluate patients after treatment with a product candidate;
- patients may die during a clinical trial because their disease is too advanced or because they experience medical problems that may not be related to the product candidate;
- sufficient numbers of patients may not enroll in our clinical trials; or
- we may be unable to produce sufficient quantities of a product candidate to complete the trial.



Furthermore, regulatory authorities, including the FDA, may have varying interpretations of our pre-clinical and clinical trial data, which could delay, limit or prevent regulatory approval or clearance. Any delays or difficulties in obtaining regulatory approvals or clearances for our product candidates may:

- adversely affect the marketing of any products we or our collaborators develop;
- impose significant additional costs on us or our collaborators;
- diminish any competitive advantages that we or our collaborators may attain; and
- limit our ability to receive royalties and generate revenue and profits.

If we do not receive regulatory approval for our products in a timely manner, we will not be able to commercialize them in the timeframe anticipated, and, therefore, our business will suffer.

*We must receive separate regulatory approvals for each of our product candidates for each type of disease indication before we can market and sell them in the United States or internationally.*

We and our collaborators cannot sell any drug or vaccine until we receive regulatory approval from governmental authorities in the United States, including the FDA, and from similar agencies in other countries. Oncophage and any other drug candidate could take a significantly longer time to gain regulatory approval than we expect or may never gain approval or may gain approval for only limited indications.

*Even if we do receive regulatory approval for our product candidates, the FDA or international regulatory authorities may impose limitations on the indicated uses for which our products may be marketed or subsequently withdraw approval, or take other actions against us or our products adverse to our business.*

The FDA and international regulatory authorities generally approve products for particular indications. If an approval is for a limited indication, this limitation reduces the size of the potential market for that product. Product approvals, once granted, may be withdrawn if problems occur after initial marketing. Failure to comply with applicable FDA and other regulatory requirements can result in, among other things, warning letters, fines, injunctions, civil penalties, recall or seizure of products, total or partial suspension of production, refusal of the government to renew marketing applications and criminal prosecution.

*We may not generate further product sales revenues from Quilvax-FELV.*

To date, we have generated product sales revenues from only one product, our feline leukemia vaccine named Quilvax-FELV. Our revenues from Quilvax-FELV for the years ended December 31, 2003, 2002, and 2001 were \$3.5 million, \$2.6 million, \$1.6 million, respectively. These revenues are generated through sales of Quilvax-FELV to our marketing partner Virbac, S.A. Our original supply agreement with Virbac, S.A. expired in July 2002, at which point we began to supply the product to Virbac, S.A. through month-to-month supply agreements. If we cease to ship them Quilvax-FELV, we may not generate further revenues from the sale of this product, which is the only product we currently sell. In addition, any regulatory, marketing or other difficulties we experience with Quilvax-FELV could jeopardize that revenue stream. We are currently negotiating the sale of our manufacturing and certain intellectual property rights to the feline leukemia vaccine, conditioned on, among other things, the purchaser agreeing to manufacture QS-21 for us. Until such a transaction has closed, there remains a significant possibility that it will not take place. If we complete this transaction, we will lose our sole current source of product revenue. Furthermore, we expect our revenue from sales of this product during the first quarter of 2004 to be substantially lower than in prior quarters, regardless of whether the sale closes.

***Our business development efforts to partner Oncophage, our most advanced product candidate, are in very early stages and may not result in a collaboration agreement within the next 12 months, if at all.***

We are engaged in efforts to partner Oncophage, our most advanced product candidate, with a larger pharmaceutical or biotech company to assist us with the global commercialization of Oncophage. While we have been pursuing these business development efforts for several years, we have not negotiated a definitive agreement relating to the potential commercialization of Oncophage. Many larger companies may be unwilling to commit to a substantial agreement prior to receipt of additional clinical data or, in the absence of such data, may demand economic terms that are unfavorable to us. Even if Oncophage generates favorable clinical data, we may not be able to negotiate a transaction that provides us with favorable economic terms. While some other biotechnology companies have negotiated large collaborations, we may not be able to negotiate any agreements with terms that replicate the terms negotiated by those other companies. We may not, for example, obtain significant upfront payments or substantial royalty rates. Some larger companies are skeptical of the commercial potential and profitability of a personalized product candidate like Oncophage.

***We may not receive significant payments from collaborators due to unsuccessful results in existing collaborations or failure to enter into future collaborations.***

Part of our strategy is to develop and commercialize some of our products by continuing our existing collaborative arrangements with academic and corporate collaborators and licensees and by entering into new collaborations. Our success depends on our ability to negotiate such agreements and on the success of the other parties in performing research, preclinical and clinical testing. Our collaborations involving QS-21, for example, depend on our licensees successfully completing clinical trials and obtaining regulatory approvals. These activities frequently fail to produce marketable products. For example, in March 2002, Elan Corporation and Wyeth Ayerst Laboratories announced a decision to permanently cease dosing patients in their Phase IIA clinical trial of their AN-1792 Alzheimer's vaccine containing our QS-21 adjuvant. Several of our agreements also require us to transfer important rights to our collaborators and licensees. As a result of collaborative agreements, we will not completely control the nature, timing or cost of bringing these products to market. These collaborators and licensees could choose not to devote resources to these arrangements or, under certain circumstances, may terminate these arrangements early. They may cease pursuing the program or elect to collaborate with a different company. In addition, these collaborators and licensees, outside of their arrangements with us, may develop technologies or products that are competitive with those that we are developing. From time to time we may also become involved in disputes with our collaborators. As a result of these factors, our strategic collaborations may not yield revenues. In addition, we may be unable to enter into new collaborations or enter into new collaborations on favorable terms. Failure to generate significant revenue from collaborations would increase our need to fund our operations through sales of equity.

***If we are unable to purify heat shock proteins from some cancer types, we may have difficulty successfully completing our clinical trials and, even if we do successfully complete our clinical trials, the size of our potential market may decrease.***

Heat shock proteins occur naturally in the human body and have the potential to activate powerful cellular immune responses. Our ability to successfully develop and commercialize Oncophage or AG-858 for a particular cancer type depends on our ability to purify heat shock proteins from that type of cancer. If we experience difficulties in purifying heat shock proteins in our clinical trials, including our Phase III clinical trials, it may lower the probability of a successful analysis of these trials. Our overall manufacturing success rate to date for our Phase III trial, C-100-12, in renal cell carcinoma is 92%; for our Phase III trial in metastatic melanoma, C-100-21 it is 74%. Based on our completed earlier clinical trials and our ongoing clinical trials conducted in renal cell carcinoma (including our C-100-12 trial), we have been able to

manufacture Oncophage from 93% of the tumors delivered to our manufacturing facility; for melanoma (including our C-100-21 trial) 84%; for colorectal cancer, 98%; for gastric cancer, 81%; for lymphoma, 89%, and for pancreatic cancer, 46%. The relatively low rate for pancreatic cancer is due to the abundance of proteases in pancreatic tissue. Proteases are enzymes that break down proteins. These proteases may degrade the heat shock proteins during the purification process. We have made process development advances that have improved the manufacture of Oncophage from pancreatic tissue. In an expanded Phase I pancreatic cancer study, Oncophage was manufactured from five of five tumor samples (100%), bringing the aggregate success rate for this cancer type, which was previously 30%, to 46%. We have successfully manufactured AG-858 from approximately 75% of the patient samples received.

We may encounter problems with other types of cancers as we expand our research. If we cannot overcome these problems, the number of cancer types that Oncophage could treat would be limited. In addition, if we commercialize Oncophage, we may face claims from patients for whom we were unable to produce a vaccine.

***If we fail to sustain and further build our intellectual property rights, competitors will be able to take advantage of our research and development efforts to develop competing products.***

If we are not able to protect our proprietary technology, trade secrets and know-how, our competitors may use our inventions to develop competing products. We currently have exclusive rights to 70 issued U.S. patents and 97 foreign patents. We also have rights to 58 pending U.S. patent applications and 113 pending foreign patent applications. However, our patents may not protect us against our competitors. The standards which the United States Patent and Trademark Office uses to grant patents, and the standards which courts use to interpret patents, are not always applied predictably or uniformly and can change, particularly as new technologies develop. Consequently, the level of protection, if any, that will be provided by our patents if we attempt to enforce them and they are challenged in court, is uncertain. In addition, the type and extent of patent claims that will be issued to us in the future is uncertain. Any patents that are issued may not contain claims that permit us to stop competitors from using similar technology.

In addition to our patented technology, we also rely on unpatented technology, trade secrets and confidential information. We may not be able to effectively protect our rights to this technology or information. Other parties may independently develop substantially equivalent information and techniques or otherwise gain access to or disclose our technology. We generally require each of our employees, consultants, collaborators and certain contractors to execute a confidentiality agreement at the commencement of an employment, consulting, collaborative or contractual relationship with us. However, these agreements may not provide effective protection of our technology or information or, in the event of unauthorized use or disclosure, they may not provide adequate remedies.

***We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights, and we may be unable to protect our rights to, or use, our technology.***

If we choose to go to court to stop someone else from using the inventions claimed in our patents, that individual or company has the right to ask a court to rule that our patents are invalid and should not be enforced against that third party. These lawsuits are expensive and would consume time and other resources even if we were successful in stopping the infringement of our patents. In addition, there is a risk that the court will decide that our patents are not valid and that we do not have the right to stop the other party from using the inventions. There is also the risk that, even if the validity of our patents is upheld, the court will refuse to stop the other party on the grounds that such other party's activities do not infringe our patents.

Furthermore, a third party may claim that we are using inventions covered by such third party's patents or other intellectual property rights and may go to court to stop us from engaging in our normal operations and activities. These lawsuits are expensive and would consume time and other resources. There is a risk that a court would decide that we are infringing the third party's patents and would order us to stop the activities covered by the patents. In addition, there is a risk that a court will order us to pay the other party damages for having violated the other party's patents. The biotechnology industry has produced a proliferation of patents, and it is not always clear to industry participants, including us, which patents cover various types of products. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. We know of patents issued to third parties relating to heat shock proteins and alleviation of symptoms of cancer, respectively. We have reviewed these patents, and we believe, as to each claim in those patents, that we either do not infringe the claim of the patents or that the claim is invalid. Moreover, patent holders sometimes send communications to a number of companies in related fields, suggesting possible infringement, and we, like a number of biotechnology companies, have received this type of communication, including with respect to the third-party patents mentioned above. If we are sued for patent infringement, we would need to demonstrate that our products either do not infringe the patent claims of the relevant patent and/or that the patent claims are invalid, which we may not be able to do. Proving invalidity, in particular, is difficult since it requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Additionally, one of the patent applications licensed to us contains claims that are substantially the same as claims in three third-party patents relating to heat shock proteins. The United States Patent and Trademark Office has declared an interference proceeding with respect to our pending U.S. Patent Application Serial No. 08/527,391 and two of these third party patents (U.S. Patent No. 5,747,332 and U.S. Patent No. 6,066,716) to resolve this conflict. Our request to have the third patent (U.S. Patent No. 6,433,141) included within the interference has been granted by the United States Patent and Trademark Office. The claims of our application are concerned with technology relating to certain heat shock protein-peptide complexes and methods for preparing those complexes. The United States Patent and Trademark Office has decided that our claims have an earlier effective filing date than the conflicting claims of the other patents and that such conflicting claims are not patentable to the third party. The third party has not appealed this decision and the deadline for doing so has passed. Thus, the conflicting claims of the third party are deemed invalid.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to enter into collaborations with other entities.

***If we fail to maintain positive relationships with particular individuals, we may be unable to successfully develop our product candidates, conduct clinical trials and obtain financing.***

Pramod K. Srivastava, Ph.D., a member of our board of directors, the chairman of our scientific advisory board, and a consultant to us, and Garo H. Armen, Ph.D., the chairman of our board of directors and our chief executive officer, who together founded Antigenics in 1994, have been, and continue to be, integral to building the company and developing our technology. If either of these individuals decreases his contributions to the company, our business could be adversely impacted.

Dr. Srivastava is not an employee of Antigenics and has other professional commitments. We sponsor research in Dr. Srivastava's laboratory at the University of Connecticut Health Center in exchange for the right to license discoveries made in that laboratory with our funding. Dr. Srivastava is a member of the faculty of the University of Connecticut School of Medicine. The regulations and policies of the University of Connecticut Health Center govern the relationship between a faculty member and a commercial enterprise.

These regulations and policies prohibit Dr. Srivastava from becoming our employee. Furthermore, the University of Connecticut may modify these regulations and policies in the future to further limit Dr. Srivastava's relationship with us. Dr. Srivastava has a consulting agreement with Antigenics, which includes financial incentives for him to remain associated with us, but these may not prove sufficient to prevent him from severing his relationship with Antigenics, even during the time covered by the consulting agreement. In addition, this agreement does not restrict Dr. Srivastava's ability to compete against us after his association with Antigenics is terminated. This agreement expires in March 2005, but will be automatically extended for additional one-year periods unless either party decides not to extend the agreement. If Dr. Srivastava were to terminate his affiliation with us or devote less effort to advancing our technologies, we may not have access to future discoveries that could advance our technologies.

We do not have an employment agreement with Dr. Armen. In addition, we do not carry key employee insurance policies for Dr. Armen or any other employee.

We also rely greatly on employing and retaining other highly trained and experienced senior management and scientific personnel. Since our manufacturing process is unique, our manufacturing and quality control personnel are very important to us. The competition for these and other qualified personnel in the biotechnology field is intense. If we are not able to attract and retain qualified scientific, technical and managerial personnel, we probably will be unable to achieve our business objectives.

***We face litigation that could result in substantial damages and may divert management's time and attention from our business.***

Antigenics, our chairman and chief executive officer, Garo H. Armen, Ph.D., and two brokerage firms that served as underwriters in our initial public offering have been named as defendants in a civil class action lawsuit filed on November 5, 2001 in the Federal District Court in the Southern District of New York. Dr. Armen was dismissed without prejudice from these claims in October 2002. Several of plaintiff's claims against us were dismissed with leave to amend in February 2003. The suit alleges that these underwriters charged secret excessive commissions to certain of their customers in return for allocations of our stock in the offering. The suit also alleges that shares of our stock were allocated to certain of the underwriters' customers based upon an agreement by such customers to purchase additional shares of our stock in the secondary market. We are currently in settlement discussions with plaintiffs; however a failure to finalize a settlement could require us to pay substantial damages. Regardless of the outcome, participation in a lawsuit may cause a diversion of our management's time and attention from our business.

In addition, we are involved in other litigation and may become involved in additional litigation with our commercial partners or with others. Any such litigation could be expensive in terms of out-of-pocket costs and management time, and the outcome of any such litigation will be uncertain.

***If we fail to obtain adequate levels of reimbursement for our product candidates from third-party payers, the commercial potential of our product candidates will be significantly limited.***

Our profitability will depend on the extent to which government authorities, private health insurance providers and other organizations provide reimbursement for the cost of our product candidates. Many patients will not be capable of paying for our product candidates themselves. A primary trend in the United States health care industry is toward cost containment. Large private payers, managed care organizations, group purchasing organizations and similar organizations are exerting increasing influence on decisions regarding the use of particular treatments. Furthermore, many third-party payers limit reimbursement for newly approved health care products. Cost containment measures may prevent us from becoming profitable.

It is not clear that public and private insurance programs will determine that Oncophage or our other product candidates come within a category of items and services covered by their insurance plans. For example, although the federal Medicare program covers drugs and biological products, the program takes the position that the FDA's treatment of a product as a drug or biologic does not require the Medicare program to treat the product in the same manner. Accordingly, it is possible that the Medicare program will not cover Oncophage or our other product candidates if they are approved for commercialization. It is also possible that there will be substantial delays in obtaining coverage of Oncophage or our other product candidates and that, if coverage is obtained, there may be significant restrictions on the circumstances in which there would be reimbursement. Where insurance coverage is available, there may be limits on the payment amount. Congress and the Medicare program periodically propose significant reductions in the Medicare reimbursement amounts for drugs and biologics. If some of these proposed reductions go into effect, they could have a material adverse effect on sales of any of our products that receive marketing approval. In December 2003, the President of the United States signed the Medicare Prescription Drug, Improvement, and Modernization Act of 2003. The future impact of this legislation on our product candidates is uncertain. Effective January 1, 2004, Medicare payments for many drugs administered in physician offices were reduced significantly. This provision impacts many drugs used in cancer treatment by oncologists and urologists. The payment methodology changes in future years, and it is unclear how the payment methodology will impact reimbursement for Oncophage, if it receives regulatory approval, and incentives for physicians to recommend Oncophage relative to alternative therapies.

***Product liability and other claims against us may reduce demand for our products or result in substantial damages.***

We face an inherent risk of product liability exposure related to testing our product candidates in human clinical trials and will face even greater risks if we sell our product candidates commercially. An individual may bring a product liability claim against us if one of our product candidates cause, or merely appears to have caused, an injury. Product liability claims may result in:

- decreased demand for our product candidates;
- injury to our reputation;
- withdrawal of clinical trial volunteers;
- costs of related litigation; and
- substantial monetary awards to plaintiffs.

We manufacture Oncophage and AG-858 from a patient's cancer cells, and a medical professional must inject Oncophage or AG-858 into that same patient. A patient may sue us if we, a hospital or a delivery company fails to deliver the removed cancer tissue or that patient's Oncophage or AG-858. We anticipate that the logistics of shipping will become more complex as the number of patients we treat increases, and it is possible that all shipments will not be made without incident. In addition, administration of Oncophage or AG-858 at a hospital poses another chance for delivery to the wrong patient. Currently, we do not have insurance that covers loss of or damage to Oncophage or AG-858 and we do not know whether insurance will be available to us at a reasonable price or at all. We have limited product liability coverage for clinical research use of product candidates as well as for the commercial sale of Quilvax-FELV. Our product liability policy provides \$10 million aggregate coverage and \$10 million per occurrence. This limited insurance coverage may be insufficient to fully compensate us for future claims.

***We may incur significant costs complying with environmental laws and regulations.***

We use hazardous, infectious and radioactive materials in our operations, which have the potential of being harmful to human health and safety or the environment. We store these flammable, corrosive, toxic, infectious, radioactive materials and various wastes resulting from their use at our facilities pending ultimate use and disposal. We are subject to a variety of federal, state and local laws and regulations governing use, generation, storage, handling and disposal of these materials. We may incur significant costs complying with both current and future environmental health and safety laws and regulations. In particular, we are subject to regulation by the Occupational Safety and Health Administration, the Environmental Protection Agency, the Drug Enforcement Agency, the Department of Transportation, the Centers for Disease Control and Prevention, the National Institutes of Health, the International Air Transportation Association and various state and local agencies. We are also subject to regulation under the Toxic Substances Control Act and the Resource Conservation Development programs. At any time, one or more of the aforementioned agencies could adopt regulations that may affect our operations. We are unable to predict whether any agency will adopt new regulations that could have an adverse material effect on us or on our programs.

Although we believe that our current procedures and programs for handling, storage and disposal of these materials comply with federal, state and local laws and regulations, we cannot eliminate the risk of accidental injury or contamination from these materials. Although we have limited pollution liability coverage (\$2,000,000) and a workers' compensation liability policy, in the event of an accident or accidental release, we could be held liable for resulting damages, which could be substantially in excess of any available insurance coverage and could substantially disrupt our business.

***Our competitors in the biotechnology and pharmaceutical industries may have superior products, manufacturing capability or marketing expertise.***

Our business may fail because we face intense competition from major pharmaceutical companies and specialized biotechnology companies engaged in the development of product candidates and other therapeutic products, including heat shock proteins directed at cancer, infectious diseases, autoimmune disorders and degenerative disorders. Several of these companies have products that utilize similar technologies and/or personalized medicine techniques, such as CancerVax's Canvaxin, Dendreon's Provenge and Mylovenge, Stressgen's HspE7, AVAX's M-Vax and O-Vax, Intracel's OncoVax and Cell Genesys' GVAX vaccines. Additionally, many of our competitors, including large pharmaceutical companies, have greater financial and human resources and more experience than we do. Our competitors may:

- commercialize their products sooner than we commercialize our own;
- develop safer or more effective therapeutic drugs or preventive vaccines and other therapeutic products;
- implement more effective approaches to sales and marketing;
- establish superior proprietary positions; or
- discover technologies that may result in medical insights or breakthroughs, which may render our drugs or vaccines obsolete even before they generate any revenue.

More specifically, if we receive regulatory approvals, some of our product candidates will compete with well established, FDA approved therapies such as interleukin-2 and interferon-alpha for kidney cancer and melanoma, which have generated substantial sales over a number of years. We anticipate that we will face increased competition in the future as new companies enter markets we seek to address and scientific developments surrounding immunotherapy and other cancer therapies continue to accelerate.

## **Risks Related to our Common Stock**

### ***Our officers and directors may be able to block proposals for a change in control.***

Antigenics Holdings L.L.C. is a holding company that owns shares of our common stock and as of December 31, 2003, Antigenics Holdings L.L.C. controlled approximately 28% of our outstanding common stock. Due to this concentration of ownership, Antigenics Holdings L.L.C. may be able to prevail on all matters requiring a stockholder vote, including:

- the election of directors;
- the amendment of our organizational documents; or
- the approval of a merger, sale of assets or other major corporate transaction.

Certain of our directors and officers directly and indirectly own approximately 74% of Antigenics Holdings L.L.C. and, if they elect to act together, can control Antigenics Holdings L.L.C. In addition, several of our directors and officers directly and indirectly own approximately 4% of our outstanding common stock.

### ***A single, otherwise unaffiliated, stockholder holds a substantial percentage of our outstanding capital stock.***

According to publicly filed documents, Mr. Brad M. Kelley beneficially owns 5,546,240 shares of our outstanding common stock and 31,620 shares of our Series A convertible preferred stock. The shares of preferred stock are currently convertible at any time into 2,000,000 shares of common stock representing an initial conversion price of \$15.81. If Mr. Kelley had converted all of the shares of preferred stock on December 31, 2003, he would have held approximately 18.2% of our outstanding common stock.

We have no standstill or other agreements with Mr. Kelley that restrict his ability to acquire or dispose of shares of our common stock. All of the shares of our common stock owned by Mr. Kelley are eligible for sale in the public market subject to compliance with the applicable securities laws. Substantial sales of common stock by Mr. Kelley would depress the market price of our common stock.

Mr. Kelley's substantial ownership position provides him with the ability to substantially influence the outcome of matters submitted to our stockholders for approval. Furthermore, together with the shares held by Antigenics Holdings L.L.C., Mr. Kelley and Antigenics Holdings L.L.C. control approximately 42.3% of our outstanding common stock, providing substantial ability, if they vote in the same manner, to determine the outcome of matters submitted to a stockholder vote. If Mr. Kelley were to convert all of his preferred stock into common stock, the combined percentage would increase to 45.0%. Additional purchases of our common stock by Mr. Kelley also would increase both his own percentage of outstanding voting rights and the percentage combined with Antigenics Holdings L.L.C. (Mr. Kelley's shares of preferred stock do not carry voting rights; the common stock issuable upon conversion, however, carries the same voting rights as other shares of common stock.)

### ***Provisions in our organizational documents could prevent or frustrate any attempts by stockholders to replace our current management.***

Our certificate of incorporation and bylaws contain provisions that could make it more difficult for a third party to acquire us without consent of our board of directors. Our certificate of incorporation provides for a staggered board and removal of directors only for cause. Accordingly, stockholders may elect only a minority of our board at any annual meeting, which may have the effect of delaying or preventing changes in management. In addition, under our certificate of incorporation, our board of directors may issue up to approximately 25 million shares of preferred stock, and determine the terms of those shares of stock without any further action by our stockholders. Our issuance of preferred stock could make it more difficult for a third



party to acquire a majority of our outstanding voting stock and thereby effect a change in the composition of our board of directors. Our certificate of incorporation also provides that our stockholders may not take action by written consent. Our bylaws require advance notice of stockholder proposals and nominations, and permit only our president or a majority of the board of directors to call a special stockholder meeting. These provisions may have the effect of preventing or hindering attempts by our stockholders to replace our current management. In addition, Delaware law prohibits a corporation from engaging in a business combination with any holder of 15% or more of its capital stock until the holder has held the stock for three years unless, among other possibilities, the board of directors approves the transaction. The board may use this provision to prevent changes in our management. Also, under applicable Delaware law, our board of directors may adopt additional anti-takeover measures in the future.

***Our stock has low trading volume and its public trading price has been volatile.***

Between our initial public offering on February 4, 2000 and March 8, 2004, the closing price of our common stock has fluctuated between \$6.86 and \$52.63 per share, with an average daily trading volume for the year ended December 31, 2003 of approximately 477,000 shares. The market has experienced significant price and volume fluctuations that are often unrelated to the operating performance of individual companies. In addition to general market volatility, many factors may have a significant adverse effect on the market price of our stock, including:

- announcements of decisions made by public officials;
- results of our preclinical and clinical trials;
- announcements of technological innovations or new commercial products by us or our competitors;
- developments concerning proprietary rights, including patent and litigation matters;
- publicity regarding actual or potential results with respect to products under development by us or by our competitors;
- regulatory developments; and
- quarterly fluctuations in our financial results.

***The sale of a significant number of shares could cause the market price of our stock to decline.***

The sale by us or the resale by stockholders of a significant number of shares of our common stock could cause the market price of our common stock to decline. As of December 31, 2003, we had approximately 39,523,000 shares of common stock outstanding. During February 2004 we sold an additional 5,400,000 shares of our common stock. All of these shares are eligible for sale on the NASDAQ National Market, although certain of the shares are subject to sales volume and other limitations.

We have filed registration statements to permit the sale of 6,436,831 shares of common stock under our equity incentive plan, and certain equity plans that we assumed in the acquisitions of Aquila Biopharmaceuticals, Inc. and Aronex Pharmaceuticals, Inc. We have also filed a registration statement to permit the sale of 300,000 shares of common stock under our employee stock purchase plan. We have also filed a registration statement to permit the sale of 100,000 shares of common stock under our directors' deferred compensation plan. As of December 31, 2003, options to purchase approximately 4,427,000 shares of our common stock upon exercise of options with a weighted average exercise price per share of \$9.70 were outstanding. Many of these options are subject to vesting that generally occurs over a period of up to five years following the date of grant. As of December 31, 2003, warrants to purchase approximately 130,000 shares of our common stock with a weighted average exercise price per share of \$45.24 were outstanding. We have also filed a registration

statement to permit the sale of our common stock, preferred stock and debt securities, which we may sell separately or together at any time in any combination, in an aggregate amount of up to \$100 million. The 5,400,000 common shares sold during February 2004 were sold pursuant to that registration statement, thereby reducing the aggregate amount of securities we may sell pursuant to that registration statement to \$43.3 million.

### **Critical Accounting Policies and Estimates**

The SEC defines "critical accounting policies" as those that require application of management's most difficult, subjective, or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain and may change in subsequent periods.

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. We base those estimates on historical experience and on various assumptions that are believed to be reasonable under the circumstances. Actual results could differ from those estimates.

The following listing is not intended to be a comprehensive list of all of our accounting policies. Our significant accounting policies are described in Note 2 to our consolidated financial statements. In many cases, the accounting treatment of a particular transaction is dictated by accounting principles generally accepted in the United States of America, with no need for our judgment in their application. There are also areas in which our judgment in selecting an available alternative would not produce a materially different result. We have identified the following as our critical accounting policies:

#### *Research and Development*

Research and development expenses include the costs associated with our internal research and development activities including, salaries and benefits, occupancy costs, clinical manufacturing costs, related administrative costs, and research and development conducted for us by outside advisors, such as sponsored university-based research partners, and clinical research organizations. We account for our clinical study costs by estimating the total cost to treat a patient in each clinical trial and recognizing this cost as we estimate when the patient receives treatment, beginning when the patient enrolls in the trial. This estimated cost includes payments to the trial site and patient-related costs, including lab costs, related to the conduct of the trial. Cost per patient varies based on the type of clinical trial, the site of the clinical trial, and the length of the treatment period for each patient. As we become aware of the actual costs, we adjust our accrual; such changes in estimate may be a material change in our clinical study accrual, which could also materially affect our results of operations. Research and development costs are expensed as incurred and were \$48,527,000, \$39,983,000 and \$31,357,000 for the years ended December 31, 2003, 2002, and 2001, respectively.

#### *Investments*

We classify investments in marketable securities at the time of purchase. At December 31, 2003, all marketable securities were classified as available-for-sale and as such, changes in the fair value of the available-for-sale securities are reported as a separate component of accumulated other comprehensive income (loss) until realized. If we were to classify future investments as trading securities rather than available-for-sale, our financial results would be subject to greater volatility. If declines in the fair value of available-for-sale securities are determined to be other than temporary, accumulated other comprehensive income is reduced and the impairment is charged to operations.

Investments of less than 20% of the voting control of companies or other entities over whose operating and financial policies we do not have the power to exercise significant influence, are accounted for by the cost method. Pursuant to this method, we currently account for our investment in AGTC under the cost method and, as of December 31, 2003, we have included it in non-current other assets on the consolidated balance sheet, as more fully disclosed in Note 5 to our consolidated financial statements. The general partner of AGTC determines the timing of our additional contributions. Our investment represents an approximate ownership of 2%. We continue to assess the realizability of this investment. In order to assess whether or not there has been an other than temporary decline in the value of this investment, we analyze several factors including: (i) the carrying value of the limited partnership's investments in its portfolio companies, (ii) how recently the investments in the portfolio companies had been made, (iii) the post-financing valuations of those investments, (iv) the level of un-invested capital held by the limited partnership, and (v) the overall trend in venture capital valuations. Based on this analysis, during the year ended December 31, 2003, we concluded that an other than temporary decline of \$217,000 had occurred. Our investment balance aggregated \$1,537,000 at December 31, 2003.

#### *Revenue Recognition*

Revenue from product sales is recognized at the time of product shipment. Revenue for services under research and development grants and contracts are recognized as the services are performed, milestones are achieved, or clinical trial materials are provided.

#### *Stock Option Accounting*

We account for options granted to employees and directors in accordance with Accounting Principles Board ("APB") Opinion No. 25, *Accounting for Stock Issued to Employees*, and related interpretations. As such, compensation expense is recorded on fixed stock option grants only if the current fair value of the underlying stock exceeds the exercise price of the option at the date of grant and it is recognized on a straight-line basis over the vesting period. We account for stock options granted to non-employees on a fair-value basis in accordance with Statement of Financial Accounting Standards ("SFAS") No. 123, *Accounting for Stock-Based Compensation* and Emerging Issues Task Force Issue ("EITF") No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*. As a result, the non-cash charge to operations for non-employee options with vesting or other performance criteria is affected each reporting period by changes in the fair value of our common stock. As required, we also provide pro forma net loss attributable to common stockholders and pro forma net loss attributable to common stockholders per common share disclosures for employee and director stock option grants as if the fair-value-based method defined in SFAS No. 123 had been applied (see Note 2 to our consolidated financial statements).

#### **Recently Issued Accounting Standards**

In May 2003, the FASB issued SFAS No. 150, *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*. SFAS No. 150 establishes standards for how an issuer classifies and measures in its statement of financial position certain financial instruments with characteristics of both liabilities and equity. It requires that an issuer classify a financial instrument that is within its scope as a liability (or an asset in some circumstances) because that financial instrument embodies an obligation of the issuer. SFAS No. 150 is effective for financial instruments entered into or modified after May 31, 2003. For certain mandatorily redeemable financial instruments, SFAS No. 150 will be effective for us at a later date if we were to enter into certain mandatorily redeemable financial instruments. The adoption of SFAS No. 150 did not have an impact to our consolidated financial statements.

In May 2003, the Emerging Issues Task Force reached a consensus on EITF Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables* ("EITF 00-21"). EITF 00-21 provides guidance on how to determine when an arrangement that involves multiple revenue-generating activities or deliverables should be divided into separate units of accounting for revenue recognition purposes, and if this division is required, how the arrangement consideration should be allocated among the separate units of accounting. The guidance in the consensus is effective for revenue arrangements entered into in quarters beginning after June 15, 2003. The adoption of EITF 00-21 could affect the timing or pattern of revenue recognition for future collaborative research and or license agreements.

#### Item 7A. Quantitative and Qualitative Disclosures About Market Risk

In the normal course of business, we are exposed to fluctuations in interest rates as we seek debt financing to make capital expenditures, and foreign currency exchange risk related to our transactions denominated in foreign currencies. We do not employ specific strategies, such as the use of derivative instruments or hedging, to manage these exposures. Our currency exposures vary, but are primarily concentrated in the Euro. Further, we do not expect our market risk exposures to change in the near term.

The information below summarizes our market risks associated with debt obligations as of December 31, 2003. Fair values included herein have been estimated taking into consideration the nature and terms of each instrument and the prevailing economic and market conditions at December 31, 2003. The table presents cash flows by year of maturity and related interest rates based on the terms of the debt.

	Estimated Fair Value	Carrying amount December 31, 2003	Year of Maturity			
			2004	2005	2006	2007
Long-term debt(1)	\$15,882,000	\$15,868,000	\$5,623,000	\$5,733,000	\$4,468,000	\$44,000

(1) Fixed interest rates from 3.92% to 7%

In addition, we have cash equivalents and short-term investments at December 31, 2003, which are exposed to the impact of interest rate changes and our interest income fluctuates as our interest rate changes. Due to the short-term nature of our investments in money market funds, corporate debt securities, taxable auction preferred and government backed securities, our carrying value approximates their fair value of these investments at December 31, 2003.

We maintain an investment portfolio in accordance with our Investment Policy. The primary objectives of our Investment Policy are to preserve principal, maintain proper liquidity to meet operating needs and maximize yields. Although our investments are subject to credit risk, our Investment Policy specifies credit quality standards for our investments and limits the amount of credit exposure from any single issue, issuer or type of investment. Our investments are also subject to interest rate risk and will decrease in value if market interest rates increase. However, due to the conservative nature of our investments and relatively short duration, interest rate risk is mitigated. We do not own derivative financial instruments in our investment portfolio. Accordingly, we do not believe that there is any material market risk exposure with respect to derivative or other financial instruments that would require disclosure under this item.

**Item 8. Consolidated Financial Statements and Supplementary Data**

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## INDEPENDENT AUDITORS' REPORT

The Board of Directors and Stockholders  
Antigenics Inc.:

We have audited the accompanying consolidated balance sheets of Antigenics Inc. and subsidiaries as of December 31, 2003 and 2002, and the related consolidated statements of operations, stockholders' equity and comprehensive income (loss), and cash flows for each of the years in the three-year period ended December 31, 2003. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Antigenics Inc. and subsidiaries as of December 31, 2003 and 2002 and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2003, in conformity with accounting principles generally accepted in the United States of America.

As discussed in Notes 2(o), 2(p) and 7 to the consolidated financial statements, the Company adopted Statements of Financial Accounting Standards (SFAS) No. 141, Business Combinations, for purchase method business combinations completed after June 30, 2001, SFAS No. 142, Goodwill and Other Intangible Assets, effective January 1, 2002, and SFAS No. 143, Accounting for Asset Retirement Obligations effective January 1, 2003.

/s/ KPMG LLP

Princeton, New Jersey  
February 13, 2004, except as to the  
second paragraph of Note 18,  
which is as of February 18, 2004

**ANTIGENICS INC. AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**  
**December 31, 2003 and 2002**

	<u>2003</u>	<u>2002</u>
<b>ASSETS</b>		
Cash and cash equivalents .....	\$ 57,211,895	\$ 33,130,176
Short-term investments .....	32,266,347	25,595,082
Accounts receivable .....	589,698	1,115,793
Inventories .....	871,256	971,016
Prepaid expenses .....	1,899,558	1,698,330
Deferred offering costs .....	110,934	63,662
Other current assets .....	<u>372,296</u>	<u>825,536</u>
Total current assets .....	93,321,984	63,399,595
Restricted cash .....	8,521,049	—
Plant and equipment, net .....	25,032,838	11,369,525
Goodwill .....	3,081,703	3,081,703
Core and developed technology, net of accumulated amortization of \$3,107,907 and \$2,001,714 at December 31, 2003 and 2002, respectively .....	7,964,666	9,070,859
Other assets .....	<u>2,157,295</u>	<u>2,140,936</u>
Total assets .....	<u>\$ 140,079,535</u>	<u>\$ 89,062,618</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Accounts payable .....	\$ 3,179,567	\$ 1,435,090
Accrued liabilities .....	11,302,367	7,996,437
Other current liabilities .....	2,000,000	—
Current portion, long-term debt .....	<u>5,622,736</u>	<u>539,370</u>
Total current liabilities .....	22,104,670	9,970,897
Long-term debt, less current portion .....	10,244,796	11,509
Other long-term liabilities .....	2,484,317	1,323,272
Commitments and contingencies		
<b>STOCKHOLDERS' EQUITY</b>		
Preferred stock, par value \$0.01 per share, 25,000,000 shares authorized; Series A convertible preferred stock, par value \$0.01 per share; 31,620 shares designated, issued and outstanding at December 31, 2003, liquidation value of \$31,844,140 .....	316	—
Common stock, par value \$0.01 per share, 100,000,000 shares authorized; 39,522,699 and 33,113,099 shares issued and outstanding at December 31, 2003 and 2002, respectively .....	395,226	331,130
Additional paid-in capital .....	384,457,557	291,363,260
Deferred compensation .....	(72,081)	(111,017)
Accumulated other comprehensive income (loss) .....	162,802	(61,945)
Accumulated deficit .....	<u>(279,698,068)</u>	<u>(213,764,488)</u>
Total stockholders' equity .....	105,245,752	77,756,940
Total liabilities and stockholders' equity .....	<u>\$ 140,079,535</u>	<u>\$ 89,062,618</u>

See accompanying notes to consolidated financial statements.

**ANTIGENICS INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**  
**For the Years Ended December 31, 2003, 2002 and 2001**

	<u>2003</u>	<u>2002</u>	<u>2001</u>
Revenue			
Product sales .....	\$ 3,465,023	\$ 2,627,241	\$ 1,605,722
Research and development .....	<u>984,662</u>	<u>784,277</u>	<u>2,949,239</u>
Total revenues .....	<u>4,449,685</u>	<u>3,411,518</u>	<u>4,554,961</u>
Expenses:			
Cost of sales .....	(1,941,521)	(1,337,197)	(1,064,381)
Research and development .....	(48,526,842)	(39,982,656)	(31,357,223)
General and administrative .....	(21,716,531)	(19,466,501)	(13,761,628)
Acquired in-process research and development .....	<u>(—)</u>	<u>(—)</u>	<u>(34,595,747)</u>
Operating loss .....	(67,735,209)	(57,374,836)	(76,224,018)
Other income:			
Non-operating income .....	882,790	272,064	—
Interest income .....	1,165,911	1,590,033	3,373,824
Interest expense .....	<u>(247,072)</u>	<u>(365,166)</u>	<u>(690,462)</u>
Net loss .....	(65,933,580)	(55,877,905)	(73,540,656)
Dividends on Series A convertible preferred stock .....	<u>(224,140)</u>	<u>—</u>	<u>—</u>
Net loss attributable to common stockholders .....	<u><u>\$ (66,157,720)</u></u>	<u><u>\$ (55,877,905)</u></u>	<u><u>\$ (73,540,656)</u></u>
Net loss attributable to common stockholders per common share, basic and diluted .....	<u><u>\$ (1.70)</u></u>	<u><u>\$ (1.70)</u></u>	<u><u>\$ (2.61)</u></u>
Weighted average number of common shares outstanding, basic and diluted .....	<u><u>38,989,304</u></u>	<u><u>32,905,314</u></u>	<u><u>28,142,598</u></u>

See accompanying notes to consolidated financial statements.



**ANTIGENICS INC. AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE INCOME (LOSS)**  
**For the Years Ended December 31, 2003, 2002 and 2001**

	Series A Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss		Deferred Compensation	Accumulated Deficit	Total
	Number of Shares	Par Value	Number of Shares	Par Value		Loss	Loss			
Balance at December 31, 2000	—	\$ —	27,316,295	\$273,162	\$202,253,314	\$(199,711)	—	\$(1,277,357)	\$(84,345,927)	\$116,703,481
Comprehensive loss:										
Net loss	—	—	—	—	—	—	—	—	—	—
Unrealized gain on marketable securities, net	—	—	—	—	—	—	—	—	—	—
Comprehensive loss	—	—	—	—	—	—	12,005	—	(73,540,656)	(73,540,656)
Grant and recognition of stock options	—	—	—	—	474,529	—	—	747,810	—	1,222,339
Exercise of stock options and warrants	—	—	130,786	1,308	699,362	—	—	—	—	700,670
Issuance of common stock in merger on July 12, 2001, \$18.505 per share	—	—	1,547,824	15,478	28,627,004	—	—	—	—	28,642,482
Stock options and warrants exchanged in merger on July 12, 2001	—	—	—	—	1,965,909	—	—	—	—	1,965,909
Employee stock purchases	—	—	19,711	197	218,691	—	—	—	—	218,888
Balance at December 31, 2001	—	—	29,014,616	290,145	234,238,809	—	(187,706)	(529,547)	(157,886,583)	75,925,118
Comprehensive loss:										
Net loss	—	—	—	—	—	—	—	—	—	—
Unrealized gain on marketable securities, net	—	—	—	—	—	—	125,761	—	(55,877,905)	(55,877,905)
Comprehensive loss	—	—	—	—	—	—	—	—	—	—
Grant and recognition of stock options	—	—	77,496	775	416,731	—	—	418,530	—	835,261
Exercise of stock options	—	—	—	—	561,809	—	—	—	—	562,584
Issuance of common stock in follow-on offering on January 16, 2002, \$15.00 per share (net of issuance costs of \$3,989,000)	—	—	4,000,000	40,000	55,971,000	—	—	—	—	56,011,000
Employee stock purchases	—	—	20,987	210	174,911	—	—	—	—	175,121
Balance at December 31, 2002	—	—	33,113,099	331,130	291,363,260	—	(61,945)	(111,017)	(213,764,488)	77,756,940
Comprehensive loss:										
Net loss	—	—	—	—	—	—	—	—	—	—
Unrealized gain on marketable securities, net	—	—	—	—	—	—	224,747	—	(65,933,580)	(65,933,580)
Comprehensive loss	—	—	—	—	—	—	—	—	—	—
Grant and recognition of stock options	—	—	—	—	852,290	—	—	38,936	—	891,226
Exercise of stock options	—	—	130,667	1,307	1,113,843	—	—	—	—	1,115,150
Issuance of common stock in follow-on offering on January 28, 2003, \$9.92.00 per share (net of issuance costs of \$2,458,000)	—	—	6,250,000	62,500	59,475,956	—	—	—	—	59,538,456
Issuance of Series A convertible preferred stock, net of expenses of \$13,556	31,620	316	—	—	31,606,128	—	—	—	—	31,606,444
Employee stock purchases	—	—	28,933	289	270,220	—	—	—	—	270,509
Dividend on Series A convertible preferred stock	—	—	—	—	(224,140)	—	—	—	—	(224,140)
Balance at December 31, 2003	31,620	\$316	39,522,699	\$395,226	\$384,457,557	—	\$ (72,081)	\$ (279,698,068)	\$ (279,698,068)	\$105,245,752

See accompanying notes to consolidated financial statements.

**ANTIGENICS INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
**For the Years Ended December 31, 2003, 2002 and 2001**

	2003	2002	2001
Cash flows from operating activities:			
Net loss .....	\$(65,933,580)	\$(55,877,905)	\$(73,540,656)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization .....	6,485,355	5,466,145	4,149,456
Non-cash stock compensation .....	891,226	835,261	1,222,339
Acquired in-process research and development .....	—	—	34,595,747
Write-down of inventory and investments .....	325,871	1,040,941	—
Write-down of fixed assets .....	27,065	513,605	—
Effect of accounting for asset retirement obligations .....	282,148	—	—
Changes in operating assets and liabilities:			
Accounts receivable .....	526,095	(628,411)	45,514
Inventories .....	(8,946)	(158,418)	(702,611)
Prepaid expenses .....	(201,228)	(1,057,004)	103,507
Accounts payable .....	1,744,477	(1,513,327)	(1,027,694)
Accrued liabilities .....	3,142,376	685,447	(2,085,600)
Other operating assets and liabilities .....	1,531,421	(139,923)	413,551
Net cash used in operating activities .....	<u>(51,187,720)</u>	<u>(50,833,589)</u>	<u>(36,826,447)</u>
Cash flows from investing activities:			
Purchase of plant and equipment .....	(18,537,216)	(2,307,850)	(1,665,468)
Purchases of available for sale securities .....	(57,229,096)	(46,064,626)	—
Proceeds from maturities of available for sale securities .....	50,506,860	20,500,700	2,996,750
Investment in AGTC .....	(750,000)	(300,000)	(525,000)
Increase in restricted cash .....	(8,521,049)	—	—
Deposit received on potential divestiture of assets .....	2,000,000	—	—
Net cash acquired in merger .....	—	—	2,184,165
Net cash (used in) provided by investing activities .....	<u>(32,530,501)</u>	<u>(28,171,776)</u>	<u>2,990,447</u>
Cash flows from financing activities:			
Net proceeds from sale of equity .....	91,208,562	56,139,334	—
Exercise of stock options and warrants .....	1,115,150	562,584	700,670
Deferred offering costs .....	(110,934)	(63,662)	(128,334)
Employee stock purchase plan .....	270,509	175,121	218,888
Proceeds from long-term debt .....	17,042,100	—	—
Payments of long-term debt .....	(1,725,447)	(5,545,344)	(2,230,442)
Net cash provided by (used in) financing activities .....	<u>107,799,940</u>	<u>51,268,033</u>	<u>(1,439,218)</u>
Net increase (decrease) in cash and cash equivalents .....	24,081,719	(27,737,332)	(35,275,218)
Cash and cash equivalents at beginning of period .....	33,130,176	60,867,508	96,142,726
Cash and cash equivalents at end of period .....	<u>\$ 57,211,895</u>	<u>\$ 33,130,176</u>	<u>\$ 60,867,508</u>
Supplemental cash flow information:			
Cash paid for interest .....	<u>\$ 198,754</u>	<u>\$ 470,794</u>	<u>\$ 660,507</u>
Non-cash investing and financing activities:			
Issuance of equity for merger .....	—	—	<u>\$ 30,608,391</u>
Effect of Statement of Financial Accounting Standards No. 143:			
Plant and equipment .....	\$ 532,234		
Asset retirement obligation .....	\$ 814,472		

See accompanying notes to consolidated financial statements.

**ANTIGENICS INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(1) Organization and Business**

The business was formed on March 31, 1994 through the creation of a Delaware corporation (Founder Holdings Inc.). In July 1995, the founders of Founder Holdings Inc. formed Antigenics Inc., formerly, Antigenics LLC (Antigenics or the Company), a Delaware limited liability company, and subsequently transferred to the Company all of the assets, liabilities, properties and rights of the Delaware corporation in exchange for an initial 81.5% equity interest in the Company. The accounting for this recapitalization was recorded at Founder Holdings Inc.'s historical cost.

Since the reorganization in 1995, Founder Holdings Inc. has directly or indirectly owned a significant portion of our common stock. As of December 31, 2003, Founder Holdings Inc. owns approximately 79% of Antigenics Holdings LLC that in turn owns approximately 28% of our outstanding common stock. Certain of our board members and executive officers own significant interests in these related parties.

We are a biotechnology firm developing products to treat cancers, infectious diseases and autoimmune disorders. Our lead product candidates are: (i) Oncophage®, a personalized therapeutic cancer vaccine in Phase III clinical trials for the treatment of renal cell carcinoma and melanoma, (ii) AG-858, a personalized therapeutic cancer vaccine in a Phase II clinical trial for the treatment of chronic myelogenous leukemia, (iii) AG-702/AG-707, a therapeutic vaccine program in Phase I development for the treatment of genital herpes, and (iv) Aroplatin™, a novel liposomal chemotherapeutic. Our related business activities include research and development, regulatory and clinical affairs, business development, and administrative functions that support these activities.

We have incurred annual operating losses since inception and, as a result, at December 31, 2003 have an accumulated deficit of \$279,698,000. Our operations have been funded principally by sales of equity. We believe that our working capital resources at December 31, 2003, in addition to the net proceeds received from our offerings on February 6, 2004 and February 18, 2004 (see Note 18), are sufficient to satisfy our liquidity requirements through the end of 2005. Satisfying our long-term liquidity needs will require the successful commercialization of Oncophage or other products and may require additional capital.

Our lead product candidates require clinical trials and approvals from regulatory agencies as well as acceptance in the marketplace. We are conducting clinical trials in various cancers and in one infectious disease indication. Although we believe our patents, patent rights and patent applications are valid, the invalidation of our patents or failure of certain of our pending patent applications to issue as patents could have a material adverse effect upon our business. Part of our strategy is to develop and commercialize some of our products by continuing our existing collaborative arrangements with academic and corporate collaborators and licensees and by entering into new collaborations. Our success depends, in part, on the success of these parties in performing research, preclinical and clinical testing. We compete with specialized biotechnology companies, major pharmaceutical companies, universities, and research institutions. Many of these competitors have substantially greater resources than we do.

**(2) Summary of Significant Accounting Policies**

***(a) Basis of Presentation and Principles of Consolidation***

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America and include the accounts of Antigenics Inc. and our wholly owned subsidiaries. All intercompany transactions and accounts have been eliminated in consolidation.

**ANTIGENICS INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

***(b) Segment Information***

We are managed and operated as one business. The entire business is managed by a single executive operating committee that reports to the chief executive officer. We do not operate separate lines of business with respect to any of our product candidates. Accordingly, we do not prepare discrete financial information with respect to separate product areas or by location and do not have separately reportable segments as defined by Statement of Financial Accounting Standards ("SFAS") No. 131, *Disclosures about Segments of an Enterprise and Related Information*.

***(c) Use of Estimates***

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Management bases its estimates on historical experience and on various assumptions that are believed to be reasonable under the circumstances. Actual results could differ from those estimates.

***(d) Cash and Cash Equivalents***

We consider all highly liquid investments purchased with maturities at acquisition of three months or less to be cash equivalents. For years ended December 31, 2003 and 2002 cash equivalents consist primarily of money market funds and auction rate paper.

***(e) Investments***

We classify investments in marketable securities at the time of purchase. At December 31, 2003 and 2002, all marketable securities are classified as available-for-sale and as such, the investments are recorded at fair value with changes in fair value reported as a component of accumulated other comprehensive income (loss). Gains and losses on the sale of marketable securities are recognized in operations based on the specific identification method. Investments of less than 20% of the voting control of companies or other entities over whose operating and financial policies we do not have the power to exercise significant influence, are accounted for by the cost method. Pursuant to this method, we record our investment at cost and recognize dividends received as income. The carrying values of investments are periodically reviewed to determine whether a decline in value is other than temporary. Other than temporary declines in the value of available-for-sale securities are charged to operations.

***(f) Concentrations of Credit Risk***

Financial instruments that potentially subject us to concentration of credit risk are primarily cash and cash equivalents, marketable securities and accounts receivable. We invest our cash and cash equivalents in accordance with our Investment Policy, which specifies high credit quality standards and limits the amount of credit exposure from any single issue, issuer or type of investment. Credit risk on accounts receivable is minimized by the financial position of the entities with which we do business. Credit losses from our customers have been immaterial.

**ANTIGENICS INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

***(g) Inventories***

Inventories are stated at the lower of cost or market. Cost has been determined using standard costs that approximate the first-in, first-out method.

***(h) Plant and Equipment***

Plant and equipment, including software developed for internal use, are carried at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. Amortization of leasehold improvements is computed over the shorter of the lease term or estimated useful life of the asset. Additions and improvements are capitalized, while repairs and maintenance are charged to expense as incurred.

***(i) Fair Value of Financial Instruments***

The fair value of a financial instrument represents the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced sale or liquidation. Significant differences can arise between the fair value and carrying amounts of financial instruments that are recognized at historical cost amounts. The estimated fair values of all of our financial instruments, excluding debt, approximate their carrying amounts in the consolidated balance sheets. The fair value of our long-term debt was derived by evaluating the nature and terms of each note and considering the prevailing economic and market conditions at the balance sheet date. The carrying amount of debt, including current portions, is approximately \$15,868,000 and \$551,000 at December 31, 2003 and 2002, respectively; and the fair value is estimated to be approximately \$15,882,000 and \$711,000 at December 31, 2003 and 2002, respectively.

***(j) Revenue Recognition***

Revenue from product sales is recognized at the time of product shipment. Revenue for services under research and development grants and contracts are recognized as the services are performed, or as clinical trial materials are provided. Non-refundable milestone payments that represent the completion of a separate earnings process are recognized as revenue when earned. For the years ended December 31, 2003, 2002 and 2001, all of our product sales were to one customer. For the year end December 31, 2003, one research partner represented 93% of our research and development revenue, while for the year ended December 31, 2002, two partners represented 50% and 35% of total research and development revenues, and for the year ended December 31, 2001, three partners represented 13%, 34%, and 35% of total research and development revenues.

***(k) Research and Development***

Research and development expenses include the costs associated with our internal research and development activities including, salaries and benefits, occupancy costs, clinical manufacturing costs and administrative costs, and research and development conducted for us by outside advisors, sponsored research partners, clinical research organizations and clinical investigators and institutions. Research and development expenses also include all expenses related to any grant revenue recognized as well as the cost of clinical trial materials shipped to our research partners. All research and development costs are expensed as incurred.

# ANTIGENICS INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

### (1) Stock-Based Compensation

We account for options granted to employees and directors in accordance with Accounting Principles Board (“APB”) Opinion No. 25, *Accounting for Stock Issued to Employees*, and related interpretations. As such, compensation expense is recorded on fixed stock option grants only if the current fair value of the underlying stock exceeds the exercise price of the option at the date of grant and it is recognized on a straight-line basis over the vesting period.

We account for stock options granted to non-employees on a fair-value basis in accordance with SFAS No. 123, *Accounting for Stock-Based Compensation* and Emerging Issues Task Force Issue (“EITF”) No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*. As a result, any non-cash charge to operations for non-employee options with vesting or other performance criteria is affected each reporting period by changes in the fair value of our common stock.

In December 2002, the Financial Accounting Standards Board (FASB) issued SFAS No. 148, *Accounting for Stock-Based Compensation — Transition and Disclosure*, an amendment of SFAS No. 123. This Statement amends SFAS No. 123 to provide alternative methods of transition for a voluntary change to the fair-value method of accounting for stock-based employee compensation. In addition, this Statement amends the disclosure requirements of SFAS No. 123 to require prominent disclosures in both annual and interim financial statements, which annual disclosures are included below. Other than the disclosure modification, the adoption of SFAS No. 148 did not have a material effect on our consolidated financial statements.

The following table illustrates the effect on net loss attributable to common stockholders and net loss attributable to common stockholders per common share, basic and diluted had compensation cost for options granted to employees and directors and sold through our employee stock purchase plan been determined consistent with the fair value method of SFAS No. 123 (in thousands except per share data):

	Year Ended December 31,		
	2003	2002	2001
Net loss attributable to common stockholders, as reported . . .	\$(66,158)	\$(55,878)	\$(73,541)
Add: Stock-based employee and director compensation recognized under APB Opinion No. 25 . . . . .	358	482	653
Deduct: total stock-based employee and director compensation expense determined under fair-value based method for all awards . . . . .	(4,545)	(3,935)	(3,231)
Pro forma net loss attributable to common stockholders . . . . .	<u>\$(70,345)</u>	<u>\$(59,331)</u>	<u>\$(76,119)</u>
Net loss attributable to common stockholders per common share, basic and diluted:			
As reported . . . . .	\$ (1.70)	\$ (1.70)	\$ (2.61)
Pro-forma . . . . .	\$ (1.80)	\$ (1.80)	\$ (2.70)

The effects of applying SFAS No. 123, for either recognizing or disclosing compensation cost under such pronouncement, may not be representative of the effects on reported net income or loss for future years. The

## ANTIGENICS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

fair value of each option and employee stock purchase rights granted is estimated on the date of grant using an option-pricing model with the following weighted average assumptions:

	<u>2003</u>	<u>2002</u>	<u>2001</u>
Estimated volatility .....	62%	63%	68%
Expected life in years — employee and director options .....	6	6	6
Expected life in years — employee stock purchase rights .....	1	1	1
Risk-free interest rate .....	1.2%	2.4%	4.0%
Dividend yield .....	0%	0%	0%

The expected life used to estimate the fair value of non-employee options is equal to the contractual life of the option granted.

#### *(m) Income Taxes*

Prior to converting to a corporation, as a Delaware limited liability company, no federal, state and local income taxes were levied on the Company. Each member of the Company was individually responsible for reporting his or her share of our net income or loss on their personal tax returns. Therefore, no provision for income tax is recognized in the accompanying consolidated financial statements for the periods prior to February 9, 2000.

Beginning February 9, 2000, income taxes are accounted for under the asset and liability method with deferred tax assets and liabilities recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be reversed or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in operations in the period that includes the enactment date. Deferred tax assets are recorded when they more likely than not are able to be realized.

#### *(n) Net Loss Per Share*

Basic earnings or loss per common share ("EPS") is calculated by dividing net loss attributable to common stockholders by the weighted average number of common shares outstanding. Diluted EPS is calculated by dividing net loss attributable to common stockholders by the weighted average common shares outstanding plus the dilutive effect of outstanding stock options, stock warrants and the Series A Convertible Preferred Stock. Because we have reported a net loss attributable to common stockholders for all periods, diluted net loss attributable to common stockholders per common share is the same as basic net loss attributable to common stockholders per common share as the effect of including the outstanding stock options, stock warrants and the convertible preferred stock in the calculation would have reduced the net loss attributable to common stockholders per common share. Therefore, the 4,426,615 outstanding stock options, the 130,000 outstanding stock warrants and the 31,620 issued shares of Series A convertible preferred stock are not included in the calculation and basic and diluted net loss per common share attributable to common stockholders are equal.

## ANTIGENICS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

#### *(o) Goodwill and Acquired Intangible Assets*

Goodwill represents the excess of cost over the fair value of net assets of businesses acquired. We adopted the provisions of SFAS No. 141, *Business Combinations*, as of July 1, 2001 and SFAS No. 142, *Goodwill and Other Intangible Assets*, as of January 1, 2002. SFAS No. 141 requires that the purchase method of accounting be used for all business combinations and specifies the criteria that intangible assets acquired in a business combination must meet to be recognized and reported separately from goodwill. In accordance with SFAS No. 142, goodwill and acquired intangible assets determined to have an indefinite useful life are not amortized, but instead tested for impairment at least annually. SFAS No. 142 also requires that intangible assets with estimable useful lives be amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment in accordance with SFAS No. 144, *Accounting for Impairment or Disposal of Long-Lived Assets*.

SFAS No. 142 requires us to assess annually whether there is an indication that goodwill is impaired, or more frequently if events and circumstances indicate that the asset might be impaired during the year. We perform our annual impairment test on October 31 of each year. We consider ourselves as a single reporting unit for purposes of the impairment test. We determine our fair value using the quoted market price of our common stock and compare it to the carrying amount or our net book value at the date of our evaluation. To the extent the carrying amount exceeds the fair value, there is an indication that the reporting unit goodwill may be impaired and a second step of the impairment test is performed to determine the amount of the impairment to be recognized, if any.

Identifiable intangible assets deemed to have an indefinite life are tested annually for impairment, or more frequently if events and circumstances indicate that the asset might be impaired during the year. An impairment loss is recognized to the extent that the carrying amount exceeds the asset's fair value as determined based on discounted cash flows associated with the asset. We have not identified any indefinite life intangible assets.

The costs of core and developed technology are presented at estimated fair value at acquisition date. These costs are amortized on a straight-line basis over their estimated useful lives of ten years.

#### *(p) Accounting for Asset Retirement Obligations*

In June 2001, FASB issued SFAS No. 143, *Accounting for Asset Retirement Obligations*. SFAS No. 143 requires us to record the fair value of an asset retirement obligation as a liability in the period in which it incurs a legal obligation associated with the retirement of tangible long-lived assets that result from the acquisition, construction, development, and/or normal use of the assets. A legal obligation is a liability that a party is required to settle as a result of an existing or enacted law, statute, ordinance or contract. We are also required to record a corresponding asset that is depreciated over the life of the asset. Subsequent to the initial measurement of the asset retirement obligation, the obligation will be adjusted at the end of each period to reflect the passage of time (accretion) and changes in the estimated future cash flows underlying the obligation. Changes in the liability due to accretion will be charged to the consolidated statement of operations, whereas changes due to the timing of amount of cash flows will be an adjustment to the carrying amount of the related asset. We have adopted SFAS No. 143 effective January 1, 2003, the impact of which was immaterial to our consolidated financial statements. Our asset retirement obligations primarily relate to the expiration of our facility leases and anticipated costs to be incurred to return the facilities to an agreed upon condition based on our lease terms. Had SFAS No. 143 been in effect during the years presented below,



# ANTIGENICS INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

net loss attributable to common stockholders and net loss attributable to common stockholders per share, basic and diluted, would have been as follows (amounts in thousands, except per share data):

	<u>Year Ended December 31,</u>	
	<u>2002</u>	<u>2001</u>
Net loss attributable to common stockholders, as reported.....	\$(55,878)	\$(73,541)
Depreciation expense .....	(43)	(43)
Accretion expense .....	(18)	(17)
Pro forma net loss attributable to common stockholders.....	<u>\$(55,939)</u>	<u>\$(73,601)</u>
Net loss attributable to common stockholders per common share, basic and diluted:		
As reported .....	\$ (1.70)	\$ (2.61)
Pro forma .....	\$ (1.70)	\$ (2.62)

The pro forma liability for asset retirement obligations would have been as follows (amounts in thousands):

	<u>December 31,</u>
	<u>2002</u>
Long-term liabilities, less current portion, as reported .....	\$1,335
Asset retirement obligation .....	<u>367</u>
Pro forma long-term liabilities, less current portion .....	<u>\$1,702</u>

### (g) Long-lived Assets

Effective January 1, 2002, we adopted SFAS No. 144. This Statement requires that long-lived assets, except those addressed by SFAS No. 142, be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the undiscounted future net cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future undiscounted cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. SFAS No. 144 requires companies to separately report discontinued operations and extends that reporting to a component of an entity that either has been disposed of (by sale, abandonment, or in a distribution to owners) or is classified as held for sale. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell. The adoption of SFAS No. 144 did not have any impact on our consolidated financial statements because the impairment assessment under SFAS No. 144 is largely unchanged from the our previous policy.

### (r) Recent Accounting Pronouncements

In May 2003, the FASB issued SFAS No. 150, *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*. SFAS No. 150 establishes standards for how an issuer classifies and measures in its statement of financial position certain financial instruments with characteristics of both liabilities and equity. It requires that an issuer classify a financial instrument that is within its scope as a

## ANTIGENICS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

liability (or an asset in some circumstances) because that financial instrument embodies an obligation of the issuer. SFAS No. 150 is effective for financial instruments entered into or modified after May 31, 2003. For certain mandatorily redeemable financial instruments, SFAS No. 150 will be effective for us at a later date if we were to enter into certain mandatorily redeemable financial instruments. The adoption of SFAS No. 150 did not have an impact to our consolidated financial statements.

In May 2003, the Emerging Issues Task Force reached a consensus on EITF Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables* ("EITF 00-21"). EITF 00-21 provides guidance on how to determine when an arrangement that involves multiple revenue-generating activities or deliverables should be divided into separate units of accounting for revenue recognition purposes, and if this division is required, how the arrangement consideration should be allocated among the separate units of accounting. The guidance in the consensus is effective for revenue arrangements entered into in quarters beginning after June 15, 2003. The adoption of EITF 00-21 could affect the timing or pattern of revenue recognition for future collaborative research and or license agreements.

#### (3) Mergers

On July 12, 2001, we completed our acquisition of Aronex Pharmaceuticals, Inc., a biopharmaceutical company engaged in the identification and development of proprietary innovative medicines to treat cancers and infectious diseases. The acquisition was structured as a merger of a wholly owned subsidiary of Antigenics with and into Aronex Pharmaceuticals pursuant to an Agreement and Plan of Merger. The merger was a tax-free reorganization and is being accounted for as a purchase in accordance with SFAS No. 141. Through this merger we acquired a product that fits our long-term goal of creating novel therapies for serious diseases that represent advanced alternatives to conventional cancer treatments.

As consideration for the merger, in exchange for each of their shares of Aronex Pharmaceuticals common stock, the stockholders of Aronex Pharmaceuticals received (i) 0.0594 shares of Antigenics common stock and (ii) a contingent value right to receive additional shares of Antigenics common stock in the event the U.S. Food and Drug Administration (FDA) granted final approval of a New Drug Application, on or before July 6, 2002, for ATRA-IV as a treatment for acute promyelocytic leukemia (APL). Cash was payable in lieu of any fractional shares of Antigenics' common stock otherwise issuable in the merger for a price equal to the fraction times \$17.41, the closing price of Antigenics' common stock on July 12, 2001. All outstanding options and warrants to purchase shares of Aronex Pharmaceuticals common stock were automatically converted into warrants and options to purchase Antigenics common stock at the exchange ratio described above. Additionally, a then outstanding \$2.5 million note previously convertible into shares of Aronex Pharmaceuticals common stock was convertible into shares of Antigenics common stock at a rate adjusted in accordance with the exchange ratio described above. This note became due and was paid in May 2002. In September 2001, based on the results of our meetings with the FDA we determined that approval of ATRA-IV in APL was unlikely and focused our development strategy for ATRA-IV on other cancer indications. As a result, no shares of Antigenics common stock were issued for the contingent value rights.

The purchase price of \$31,171,000 is the sum of (i) \$28,642,000 representing the issuance of approximately 1,548,000 shares of Antigenics common stock valued at \$18.505 per share, which represents the average closing price per share of Antigenics' common stock for the ten trading days ending the second trading day before July 12, 2001, which were issued in accordance with the exchange ratio of 0.0594 shares of Antigenics' common stock for each of the then outstanding shares of Aronex Pharmaceuticals common stock

## ANTIGENICS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

as of July 11, 2001, (ii) \$1,966,000 representing the fair value of options and warrants to acquire Aronex Pharmaceuticals common stock which vested upon the consummation of the merger and exchanged for options and warrants to purchase 283,000 shares of Antigenics common stock and (iii) an estimated \$563,000 for fractional shares and Antigenics' costs of the merger. The exchange ratio was agreed to in arm's-length negotiations between representatives of both companies with the benefit of advice from their respective financial advisors. The fair value of the options and warrants was calculated using an option pricing model with the following weighted average assumptions: life of the option or warrant: employees and directors options — 4 years and non-employee options and warrants — remaining contractual life of 6 years; dividend yield — 0%; risk-free interest rate — 5.50%; price volatility — 74.0%.

The merger was accounted for under the purchase method of accounting, which means the purchase price was allocated to the assets and liabilities of Aronex Pharmaceuticals, including its intangible assets, based upon their fair values. Valuations of specifically identifiable intangible assets and acquired in-process research and development were completed. The valuation of acquired in-process research and development (\$37,643,000) represented the estimated fair value of products under development at Aronex Pharmaceuticals calculated using an income approach. This approach involves estimating the fair value of the acquired in-process research and development using the present value of the estimated after-tax cash flows expected to be generated by the purchased in-process research and development projects. The risk adjusted discount rates range from 45% to 55%, depending on the risks associated with each specific project. Cash inflows from projects were estimated to begin primarily in 2005 and 2006, the expected dates of product approvals. Gross margins on products are estimated at levels consistent with industry expectations. The fair values of the acquired intangible non-current assets (\$5,290,000) and acquired in-process research and development have been proportionately reduced by the amount that the estimated fair value of the net assets acquired exceeded the estimated purchase price (negative goodwill) resulting in intangible non-current assets of \$4,872,000 (to be amortized over 10 years) and acquired in-process research and development of \$34,596,000. We assumed liabilities of \$11,625,000 consisting of accounts payable and accrued expenses of \$8,276,000 and debt valued at \$3,349,000. Included in the accrued expenses are restructuring costs of approximately \$2,491,000 for the estimated net future lease payments related to the non-cancelable lease of the manufacturing and office facility located in The Woodlands, Texas, a portion of which we have sublet, and \$1,900,000 of costs to relocate or terminate Aronex Pharmaceuticals employees. In determining the lease related costs management has made certain estimates regarding the timing of and amount of any potential sublease agreement. A portion of the Texas facility remains unoccupied at December 31, 2003 due to an unfavorable subleasing market. During 2003 and 2002, we recognized additional losses on the non-cancelable lease of approximately \$753,000 and \$207,000, respectively, and charged such amounts to general and administrative expense.

## ANTIGENICS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following represents the condensed balance sheet of Aronex Pharmaceuticals at the closing of the merger, July 12, 2001 (in thousands):

Cash and cash equivalents .....	\$ 2,747
Other current assets .....	126
Acquired in-process research and development .....	34,596
Core and developed technology .....	4,872
Other assets .....	<u>455</u>
Total assets .....	<u>42,796</u>
Current liabilities .....	9,423
Long-term debt .....	501
Other liabilities .....	<u>1,701</u>
Total liabilities .....	<u>11,625</u>
Net assets acquired .....	<u><u>\$31,171</u></u>

The results of operations and cash flows of Aronex Pharmaceuticals have been included in our consolidated financial statements prospectively as of the closing of the merger. In addition, we have recognized a non-recurring charge to operations of \$34,596,000 on July 12, 2001, for the immediate write-off of the acquired in-process research and development.

Core and developed technology represents the value of the acquired patent portfolio and core technology. Core technology represents unpatented technical expertise and trade secrets, which meet the separability criterion of SFAS No. 141. Independent valuation specialists performed an allocation of the total purchase price of the acquisition to specifically-identifiable intangible assets and acquired in-process research and development.

The income approach was applied to value the patents and core technology. This approach measures the fair value of an asset based on the expected after tax net earnings or cash flows attributable to the asset over its remaining economic life. The net cash flows attributable to an asset over its economic life are estimated, discounted to present value, and summed to arrive at an estimate of the value of the asset. The value of patents was determined to be equal to the royalty that would have to be paid for the right to use these assets if they were not acquired, discounted using a rate of 45-50%. The fair-value of the core technology reflects the present value of the projected after tax earnings that will be generated by the technology after taking into account the revenue and expenses of the technology, the relative risk of the products associated with it, the contribution of other assets, and a 45-50% discount rate to reflect the time value of invested capital.

It was determined that in-process technology is partially dependent on the core technology of the company that has already proved its feasibility. The profit split from each in-process product was estimated as a percentage of the projected revenues for each in-process product that was attributable to existing core technology. The splits were based on the level of re-use of core technology in the in-process products, and the know-how that is associated with the core technology.

Through our merger with Aronex Pharmaceuticals we acquired, among other developmental products, Aroplatin which is a novel liposomal chemotherapeutic. At the date of the acquisition, none of the products

## ANTIGENICS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

under development by Aronex Pharmaceuticals that were included in our in-process research and development charges had achieved technological feasibility and none were being sold on the market. There still remained substantial risks and significant uncertainty concerning the remaining course of technical development. We need to conduct extensive additional research, preclinical and clinical testing of these products, and obtain regulatory approval, prior to any commercialization. Because of the great uncertainty associated with these issues and the remaining effort associated with development of these products, the development projects had not established technological feasibility at the acquisition dates. Further, these partially completed products had no alternative future uses at the valuation date if the contemplated programs were to fail, as the technology was highly specialized to the targeted products.

The following table reflects unaudited pro forma combined results of operations of Antigenics and Aronex Pharmaceuticals as if such merger had occurred as of January 1, 2001 (in thousands except per share data):

Revenues .....	\$ 4,647
Loss, before non-recurring charges for write-off of acquired in-process research and development .....	\$(47,601)
Loss, before non-recurring charges for write-off of acquired in-process research and development, per common share, basic and diluted .....	\$ (1.64)

These unaudited pro forma combined results have been prepared for comparative purposes only and include certain adjustments, such as additional amortization expense as a result of the new basis in fixed and intangible assets. These unaudited pro forma combined results exclude the acquired in-process research and development charge. These results do not purport to be indicative of the results of operations which actually would have occurred had the merger been consummated at the beginning of 2001, or of future results of operations of the consolidated company.

#### (4) Inventories

Inventories consist of the following at December 31, 2003, and 2002 (in thousands):

	<u>2003</u>	<u>2002</u>
Finished goods .....	\$765	\$730
Work-in-process .....	17	138
Raw materials and supplies .....	89	103
	<u>\$871</u>	<u>\$971</u>

During the years ended December 31, 2003 and 2002, we wrote off finished goods inventory of approximately \$109,000 and \$560,000, respectively representing the cost of research and development product we may not realize. The inventory write-offs were charged to research and development expenses.

#### (5) Investments

##### *Cash Equivalents and Marketable Securities*

We classify investments in marketable securities at the time of purchase. At December 31, 2003 and 2002, all marketable securities are classified as available-for-sale and as such, the investments are recorded at fair value with changes in fair value reported as a component of accumulated other comprehensive income

# ANTIGENICS INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(loss). Gains and losses on the sale of marketable securities are recognized in operations based on the specific identification method. Our unrealized holding gains and losses at each balance sheet date are as follows (in thousands):

	December 31,			
	2003		2002	
	Unrealized Holding		Unrealized Holding	
	Gains	Losses	Gains	Losses
Government backed securities .....	\$ —	\$19	\$ 4	\$—
Corporate debt securities .....	—	—	27	—
Equity securities .....	182	—	—	93
	<u>\$182</u>	<u>\$19</u>	<u>\$31</u>	<u>\$93</u>

Investments of less than 20% of the voting control of companies or other entities over whose operating and financial policies we do not have the power to exercise significant influence, are accounted for by the cost method. Pursuant to this method, we record our investment at cost and recognize dividends received as income. The carrying values of investments are periodically reviewed to determine whether a decline in value is other than temporary. Other than temporary declines in the value of available-for-sale securities are charged to operations.

Available-for-sale securities consisted of the following at December 31, 2003 and 2002 (in thousands):

	2003		2002	
	Cost	Estimated Fair Value	Cost	Estimated Fair Value
Institutional money market funds .....	\$15,513	\$15,513	\$19,102	\$19,102
Corporate debt securities .....	1,001	1,001	16,184	16,211
Taxable auction preferreds .....	20,900	20,900	15,025	15,025
Government backed securities .....	28,980	28,961	5,000	5,004
Certificates of deposit .....	1,005	1,005	1,005	1,005
Short term municipals .....	12,700	12,700	1,000	1,000
	<u>\$80,099</u>	<u>\$80,080</u>	<u>\$57,316</u>	<u>\$57,347</u>

Of the available-for-sale securities listed above, at December 31, 2003 and 2002, approximately \$47,814,000 and \$31,752,000, respectively have been classified as cash and cash equivalents on our consolidated financial balance sheet. Approximately \$32,266,000 and \$25,595,000 have been classified as short-term investments at December 31, 2003 and 2002, respectively.

### Long-term Investments

On May 18, 2000, we committed \$3,000,000 to become a limited partner in a limited partnership, called Applied Genomic Technology Capital Fund (AGTC), which will invest principally in companies that apply genomic technologies and information in their offerings of products and services or that are engaged in research and development involving genomic technologies. Capital contributions to the limited partnership are

**ANTIGENICS INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

made as requested by the general partner. As of December 31, 2003, we have invested \$1,875,000 (\$1,125,000 as of December 31, 2002) in this entity. This investment is accounted for under the cost method, as our ownership is approximately 2%. In order to assess whether or not there has been an other than temporary decline in the value of this investment, we analyze several factors including: (i) the carrying value of the limited partnership's investments in its portfolio companies, (ii) how recently the investments in the portfolio companies have been made, (iii) the post-financing valuations of those investments, (iv) the level of uninvested capital held by the limited partnership and (v) the overall trend in venture capital valuations. Based on these analyses, during the years ended December 31, 2003 and 2002, we concluded that an other than temporary decline in the value of this investment has occurred and have reduced the carrying value (the cost of our investment in this partnership) by \$217,000 and \$121,000 respectively. Our investment balance aggregated \$1,537,000 at December 31, 2003. The general partner of the limited partnership is AGTC Partners, L.P. and NewcoGen Group Inc. is the general partner of AGTC Partners, L.P. Noubar Afeyan, Ph.D., who is one of our directors, is the Chairman and Senior Managing Director and CEO of Flagship Ventures, a partnership of funds including NewcoGen Group Inc. and AGTC. In addition, Garo H. Armen, Ph.D. our chairman and chief executive officer, is a director of NewcoGen Group Inc.

**(6) Plant and Equipment, net**

Plant and equipment, net at December 31, 2003 and 2002 consists of the following (in thousands):

	2003	2002	Estimated Depreciable Lives
Furniture, fixtures and other .....	\$ 1,278	\$ 517	3 to 10 years
Laboratory and manufacturing equipment .....	9,679	8,679	4 to 10 years
Leasehold improvements .....	26,641	9,758	2 to 12 years
Software and computer equipment .....	3,058	2,541	3 years
	40,656	21,495	
Less accumulated depreciation and amortization .....	15,623	10,125	
	<u>\$25,033</u>	<u>\$11,370</u>	

Plant and equipment and leasehold improvements retired and removed from the accounts aggregated \$27,000 for the year ended December 31, 2003.

**(7) Goodwill and Other Intangible Assets**

Effective July 1, 2001 and January 1, 2002 we adopted the provisions of SFAS No. 141 and No. 142, respectively. In connection with the initial adoption of SFAS No. 142, we performed a transitional impairment evaluation of goodwill and concluded that there was no indication of impairment as of January 1, 2002. Upon adoption of SFAS No. 142, we evaluated its existing intangible assets and goodwill and reclassified our workforce intangible of \$326,000 to goodwill in order to conform to the classification criteria in SFAS No. 141. We also assessed the useful lives and residual values of all amortizable intangible assets and determined that no adjustments were necessary.

# ANTIGENICS INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Amortization expense related to goodwill was \$310,000 for the year ended December 31, 2001, and amortization expense related to the assembled workforce intangible was \$170,000 for the year ended December 31, 2001. Net loss attributable to common stockholders and basic and diluted net loss attributable to common stockholders per common share, adjusted to exclude amounts no longer amortized, as if the provisions of SFAS No. 142 had been adopted on January 1, 2001 are as follows (amounts in thousands, except per share data):

Net loss attributable to common stockholders, as reported .....	\$ (73,541)
Goodwill and assembled workforce amortization .....	480
Pro forma net loss attributable to common stockholders .....	<u>\$ (73,061)</u>
Net loss attributable to common stockholders per common share, basic and diluted:	
As reported .....	\$ (2.61)
Pro forma .....	(2.60)

The Company performed its annual impairment test as of October 31, 2003 and no indications of goodwill impairment were noted.

The following table presents (in thousands) certain information on our intangible assets as of December 31, 2003. Our intangible assets are being amortized over their estimated useful lives of ten years, with no estimated residual values.

	Weighted Average Amortization Period	As of December 31, 2003		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Amortizing intangible assets:				
Core and developed technology .....	10 yrs.	\$11,073	\$3,108	\$7,965

Amortization expense related to core and developed technology amounted to \$1,107,000, \$1,107,000, and \$843,000 for 2003, 2002 and 2001, respectively. Amortization expense is estimated as \$1,107,000 for each of the years 2004-2008 and \$2,430,000 thereafter.

### (8) Income Taxes

As of December 31, 2003, we have available net operating loss carryforwards of approximately \$261,000,000 and \$178,150,000 for federal and state income tax purposes, respectively, which are available to offset future federal and state taxable income, if any, and expire between 2008 and 2023, and 2004 and 2023, respectively. These net operating loss carryforwards include approximately \$88,035,000 for federal and state income tax purposes, acquired in our mergers. Our ability to use such net operating losses are limited by change in control provisions under Internal Revenue Code Section 382 or may expire unused. In filing our 2001 consolidated federal tax return, we made an election to waive a portion of the acquired federal net operating loss carryforwards to prevent the reduction of the tax basis of our investments in the acquired companies that would have occurred if these net operating loss carryforwards were to expire unused. Our related deferred tax asset and valuation allowance were reduced in 2002 to recognize the effect of this election. In addition, we have approximately \$5,258,000 and \$2,394,000 of federal and state research and development credits, respectively, available to offset future taxable income. These federal and state research and



**ANTIGENICS INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

development credits expire between 2020 and 2024, and 2015 and 2019, respectively. The potential impact of such provisions are among the items considered and reflected in management's assessment of our valuation allowance requirements.

The tax effect of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities as of December 31, 2003 and 2002, are presented below (in thousands):

	<u>2003</u>	<u>2002</u>
Net operating loss carryforwards .....	\$104,126	\$74,747
Start-up expenses .....	634	1,654
Research and development tax credit .....	7,652	4,826
Other temporary differences .....	<u>282</u>	<u>258</u>
Total deferred tax asset .....	112,694	81,485
Less: valuation allowance .....	<u>(112,694)</u>	<u>(81,485)</u>
Net deferred tax asset .....	<u>\$ —</u>	<u>\$ —</u>

In assessing the realizability of deferred tax assets, we consider whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. We consider projected future taxable income and tax planning strategies in making this assessment. In order to fully realize the deferred tax asset, we will need to generate future taxable income sufficient to utilize net operating losses prior to their expiration. Based upon our history of not generating taxable income due to our business activities focused on product development, we believe that it is more likely than not that the deferred tax assets will not be realized due to the uncertainty of future earnings. Accordingly, a valuation allowance has been established for the full amount of the deferred tax assets. The valuation allowance on the deferred tax asset has increased by \$31,209,000 during the year ended December 31, 2003 and decreased by \$23,957,000 during the year ended December 31, 2002. Of the deferred tax assets related to the federal and state net operating loss carryforwards, approximately \$37,820,000 relates to net operating loss carryforwards acquired in our mergers. If adjustments are made to the valuation allowance related to these net operating loss carryforwards, such adjustments will result in reductions to our goodwill and other acquired intangible assets.

Income tax benefit attributable to loss from operations was \$0 for each of the years ended December 31, 2003, 2002 and 2001, and differed from the amounts computed by applying the U.S. Federal income tax rate of 35% to loss from operations as a result of the following (in thousands):

**ANTIGENICS INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

	<u>2003</u>	<u>2002</u>	<u>2001</u>
Computed "expected" federal tax benefit .....	\$(23,077)	\$(19,557)	\$(25,739)
(Increase) reduction in income taxes benefit resulting from:			
Change in the valuation allowance .....	31,209	(23,957)	58,195
Adjustment to deferred tax asset for net operating loss carryforward waiver election .....	—	41,858	—
Net operating loss carryforward acquired in acquisition of Aronex Pharmaceuticals .....	—	—	(17,127)
State and local income benefit net of Federal income tax benefit ....	(3,751)	(3,319)	(4,368)
Other, net .....	(4,381)	4,975	(10,961)
	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

**(9) Accrued Liabilities**

Accrued liabilities consist of the following at December 31, 2003, and 2002 (in thousands):

	<u>2003</u>	<u>2002</u>
Clinical trials .....	\$ 3,063	\$2,762
Clinical contractors .....	1,928	950
Payroll .....	1,506	1,764
Professional fees .....	1,434	678
Lexington facility construction .....	1,338	—
Accrued loss on Aronex Pharmaceuticals lease .....	497	577
Other .....	1,536	1,265
	<u>\$11,302</u>	<u>\$7,996</u>

**(10) Equity**

Our authorized capital stock consists of 100,000,000 shares of common stock, \$0.01 par value per share, and 25,000,000 shares of preferred stock, \$0.01 par value per share. Our board of directors is authorized to issue the preferred stock and to set the voting, conversion and other rights.

As part of the Aronex Pharmaceuticals merger in 2001, we assumed warrants to purchase our common stock that are exercisable for approximately 104,000 shares of our common stock with a weighted average exercise price of \$52.94 per share of which approximately 38,000 expire during 2004, 57,000 expire in 2005, and 9,000 expire in 2007. In addition, we have issued warrants to purchase approximately 26,000 shares of our common stock at a weighted average exercise price of \$13.96, which expires during 2005.

In December 2001, we filed a Form S-3 universal registration statement with the Securities and Exchange Commission for the registration and potential issuance of up to \$100 million of our securities. In January 2002, we sold 4,000,000 shares of our common stock, \$0.01 par value, at \$15.00 per share and received net proceeds of approximately \$56,000,000.

## ANTIGENICS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In August 2002 we filed another registration statement to return the aggregate amount of securities registered for potential issuance back up to \$100 million. In January 2003, we sold 6,250,000 shares of our common stock, \$0.01 par value, at an average price of \$9.92 per share. We received net proceeds of \$59,538,000, after subtracting offering costs of approximately \$2,458,000.

In September 2003, we filed another registration statement to once again return the aggregate amount of securities registered for potential issuance back up to \$100 million (see Note 18).

In a private placement in September 2003 we sold 31,620 shares of our newly created Series A Convertible Preferred stock, par value \$0.01 per share, for proceeds of \$31,606,000, after deducting offering costs of approximately \$14,000. Under the terms and conditions of the Certificate of Designation creating the Series A Convertible Preferred Stock, this stock is convertible by the holder at any time into our common stock, is non-voting; carries a 2.5% annual dividend yield, has an initial conversion price of \$15.81, per common share, subject to adjustment, and is redeemable by us at its face amount on or after September 24, 2013. The liquidation value of this Series A Convertible Preferred stock is equal to \$1,000 per share outstanding plus any accrued unpaid dividends. Accrued and unpaid dividends of Series A convertible preferred stock aggregated \$224,140 or \$7.09 per share at December 31, 2003.

#### **(11) Stock-based Compensation Plans**

Our 1999 Equity Incentive Plan (the 1999 equity plan) authorizes the grant of incentive stock options within the meaning of Section 422 of the Internal Revenue Code of 1986, as amended, and non-qualified stock options for the purchase of an aggregate of 4,800,000 shares (subject to adjustment for stock splits and similar capital changes and exclusive of options exchanged at the consummation of mergers) to employees and, in the case of non-qualified stock options, to consultants and directors as defined in the equity plan. Effective June 10, 2003, our stockholders approved an amendment to our 1999 equity plan increasing the number of shares of our common stock available under the plan from 4,800,000 shares to 6,000,000. The board of directors has appointed the compensation committee to administer the 1999 equity plan.

# ANTIGENICS INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following summarizes activity for options granted to directors and employees, including those with an exercise price equal to the fair value of the underlying shares of common stock at the date of grant ("at-the-money exercise price"), those with an exercise price greater than the fair value of the underlying share of common stock at the date of grant, and those with an exercise price less than the fair value of the underlying share of common stock at the date of grant ("in-the-money exercise price"):

	<u>Options</u>	<u>Options Exercisable at End of Year</u>	<u>Weighted Average Grant-Date Fair Value</u>	<u>Weighted Average Exercise Price</u>
Outstanding December 31, 2000 .....	1,726,282	<u>840,973</u>		
Granted:				
In-the-money exercise price .....	37,200		\$9.65	\$13.27
At-the-money exercise price .....	783,246		8.97	14.05
Exercised .....	(84,143)		—	7.10
Forfeited .....	(212,839)		—	20.17
Aronex Pharmaceuticals, Inc. options exchanged	<u>178,251</u>		7.68	57.57
Outstanding December 31, 2001 .....	2,427,997	<u>1,160,736</u>		
Granted: At-the-money exercise price .....	936,150		6.92	11.72
Exercised .....	(29,328)		—	8.70
Forfeited .....	<u>(320,307)</u>		—	15.61
Outstanding December 31, 2002 .....	3,014,512	<u>1,492,230</u>		
Granted: At-the-money exercise price .....	1,125,000		5.30	9.23
Exercised .....	(129,262)		—	8.61
Forfeited .....	<u>(620,017)</u>		—	21.58
Outstanding December 31, 2003 .....	<u>3,390,233</u>	<u>1,357,937</u>		

During 2001, 37,200 options were granted to employees and directors at exercise prices, which were less than the fair value of the shares of common stock on the grant date. During 2002 and 2003, all options were granted to employees and directors at exercise prices equal to the fair value of the shares of common stock on the grant date. Compensation expense recognized with respect to such options totaled approximately \$358,000, \$482,000 and \$653,000 for the years ended December 31, 2003, 2002 and 2001, respectively. Deferred compensation at December 31, 2003 of \$72,000 will be recognized over the remaining vesting period of the options.

The table above includes the options exchanged for Aronex Pharmaceuticals options at the consummation of the merger. Each exchanged option will continue to be governed by the same terms and conditions of the applicable stock option plans that were in effect immediately prior to the consummation of the merger, except that each option will be exercisable for our common stock at an exchange ratio of 0.0594 for the Aronex Pharmaceuticals options and all outstanding options were immediately vested and exercisable.

**ANTIGENICS INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

The following summarizes activity for options granted to outside advisors:

	Options	Options Exercisable at End of Year	Weighted Average Grant-Date Fair Value	Weighted Average Exercise Price
Outstanding December 31, 2000.....	877,862	<u>820,194</u>		
Granted .....	27,300		11.38	14.14
Exercised .....	<u>(43,813)</u>		—	1.45
Outstanding December 31, 2001.....	861,349	<u>860,594</u>		
Granted .....	115,288		8.26	12.98
Exercised .....	<u>(48,168)</u>		—	6.38
Outstanding December 31, 2002.....	928,469	<u>846,288</u>		
Granted .....	63,000		5.44	7.78
Exercised .....	<u>(1,405)</u>		—	1.45
Forfeited .....	<u>(1,334)</u>		—	11.06
Outstanding December 31, 2003.....	<u>988,730</u>	<u>846,569</u>		

The outstanding options exclude 88,941 options granted to outside advisors with an exercise price which was determined based on the fair value of the underlying shares of common stock beginning on the second anniversary of the grant date as the options vest; 41,289 of these unvested options were cancelled during the year ended December 31, 2000. The remaining 47,652 options vested prior to December 31, 1998 with an exercise price of approximately \$11.17 per share and compensation expense was charged at such time.

The charge to operations related to options we granted to outside advisors totaled approximately, \$533,000, \$353,000, and \$569,000 for the years ended December 31, 2003, 2002, and 2001, respectively.

At December 31, 2003, unrecognized expense for options granted to outside advisors for which performance (vesting) has not yet been completed but the exercise price of the option is known is approximately \$764,000; such amount is subject to change each reporting period based upon changes in the fair value of our common stock, estimated volatility and the risk free interest rate until the outside advisor completes his or her performance under the option agreement.

**ANTIGENICS INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

A summary of our options outstanding and exercisable, as of December 31, 2003, follows:

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number Outstanding	Weighted Average Remaining Life (Years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
\$ 1.45 - \$ 5.00	759,988	2.4	\$ 1.81	759,988	\$ 1.81
\$ 5.01 - \$10.00	1,196,993	7.9	7.99	209,261	7.86
\$10.01 - \$15.00	2,203,723	6.8	12.46	1,130,798	12.33
\$15.01 - \$20.00	263,093	5.5	16.57	149,293	16.52
\$20.01 - \$25.00	—	—	—	—	—
\$25.01 - \$30.00	289	0.1	25.47	289	25.47
	<u>4,424,086</u>			<u>2,249,629</u>	

The preceding table excludes 2,529 options assumed in our merger with Aronex Pharmaceuticals, Inc. As of December 31, 2003, all of these options were outstanding and exercisable with a weighted average remaining life of 2.3 years and a weighted average exercise price of \$69.02 per share.

Since the 1995 reorganization described in Note 1, Founder Holdings Inc. has directly or indirectly owned a significant portion of our common stock. During 1996, Founder Holdings Inc. approved a stock option plan (Founder's Plan). In accordance with accounting principles generally accepted in the United States of America, the Founder's Plan is accounted for as if it had been adopted by us and treated as a contribution to stockholders' equity. Pursuant to the provisions of the Founder's Plan, Founder Holdings Inc. may grant options to our officers, directors, employees, and consultants to purchase common stock of Founder Holdings Inc. The terms of the options, including exercise price and vesting period, are set at the date of grant. The options have a contractual life of ten years and may not have an exercise price less than the fair value of a share of common stock of Founder Holdings Inc. at date of grant. Options to purchase a maximum of 300 shares may be granted under the Founder's Plan.

During 1996, Founder Holdings Inc. granted options to purchase approximately 160 shares to directors and employees at a weighted average exercise price of \$9,006 per share and a weighted average grant-date fair value of approximately \$4,301 per share. During 1997, Founder Holdings Inc. granted options to purchase approximately 14 shares to a director at a weighted average grant-date fair value of \$16,407 per share. All the options are immediately vested and exercisable. All of the options remain outstanding and none have been exercised.

During 1996, Founder Holdings Inc. granted options to purchase approximately 76 shares to consultants at a weighted average exercise price of \$9,006 per share and a weighted average grant-date fair value of approximately \$5,535 per share. All of the consultants' options are immediately vested and exercisable. All of the consultants' options remain outstanding and none have been exercised.

Under the 1999 Employee Stock Purchase Plan, employees may purchase shares of common stock at a discount from fair value. There are 300,000 shares of common stock reserved for issuance under the purchase plan. The purchase plan is intended to qualify as an employee stock purchase plan within the meaning of Section 423 of the Internal Revenue Code of 1986, as amended. Rights to purchase common stock under the purchase plan are granted at the discretion of the compensation committee, which determines the frequency

**ANTIGENICS INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

and duration of individual offerings under the plan and the dates when stock may be purchased. Eligible employees participate voluntarily and may withdraw from any offering at any time before the stock is purchased. Participation terminates automatically upon termination of employment. The purchase price per share of common stock in an offering will not be less than 85% of the lesser of its fair value at the beginning of the offering period or on the applicable exercise date and may be paid through payroll deductions, periodic lump sum payments or a combination of both. The plan terminates on November 15, 2009. As of December 31, 2003, 80,413 shares of common stock have been purchased under the plan.

**(12) License, Research and Other Agreements**

In November 1994, we entered into a Patent License Agreement with the Mount Sinai School of Medicine, or Mount Sinai (the Mount Sinai Agreement). Through the Mount Sinai Agreement, we obtained an exclusive worldwide license to patent rights relating to the heat shock protein technology that resulted from the research and development performed by Dr. Pramod Srivastava, our founding scientist and one of our directors. We agreed to pay Mount Sinai a royalty on the net sales of products covered by the licensed patent rights and also provided Mount Sinai with an equity interest in the company. The term of the Mount Sinai Agreement ends when the last of the licensed patents expires (at least 2018). If we fail to pay royalties that are due under the agreement, Mount Sinai may issue written notice to us. If we continue to fail to pay royalties after 60 days of the written notice, Mount Sinai can terminate the agreement. The Mount Sinai Agreement requires us to use due diligence to make the products covered by the licensed patent rights commercially available, including a requirement for us to use best efforts to reach a number of developmental milestones. If we fail to comply with the due diligence provisions of the agreement, Mount Sinai could take actions to convert our exclusive license to a non-exclusive license after six months written notice. The Mount Sinai Agreement does not contain any milestone payment provisions.

During 1995, Dr. Srivastava moved his research to Fordham University (Fordham). We entered into a sponsored research and technology license agreement with Fordham in March 1995 (the Fordham Agreement) relating to the continued development of the heat shock protein technology and agreed to make payments to Fordham to sponsor Dr. Srivastava's research. Through the Fordham Agreement, we obtained an exclusive, perpetual, worldwide license to all of the intellectual property, including all the patent rights that resulted from the research and development performed by Dr. Srivastava at Fordham. We also agreed to pay Fordham a royalty on the net sales of products covered by the Fordham Agreement through the last expiration date on the patents under the agreement (at least 2018). The agreement does not contain any milestone payment provisions or any due diligence provisions. Dr. Srivastava moved his research to the University of Connecticut Health Center during 1997 and, accordingly, the parts of the agreement related to payments for sponsored research at Fordham terminated in mid-1997.

We have two agreements with the University of Connecticut Health Center, or UConn: (1) a research agreement under which we pay UConn to sponsor research in Dr. Srivastava's laboratory and which provides us with an option to license technologies discovered and developed as a result of that research, and (2) a license agreement that provides us with the exclusive, worldwide rights to technologies discovered and developed under the research agreement, the License Agreement. Each agreement is discussed in more detail below.

In February 1998, we entered into a research agreement with UConn, and Dr. Srivastava (the Research Agreement) relating to the continued development of the heat shock protein technology. The Research

**ANTIGENICS INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

Agreement provides us with an option to license inventions stemming from the research that we sponsor at UConn and provides certain pre-determined royalty rates for licensed inventions. The Research Agreement had an initial term of five years and called for minimum payments to UConn totaling \$5,000,000, payable quarterly at a rate of \$250,000 (contingent upon the continuing employment of Dr. Srivastava by UConn). The Research Agreement was amended during 2002 and again on December 31, 2003 to: (1) extend the term of the Research Agreement to December 31, 2003 and then to December 31, 2008, and (2) provide for an annual payment of \$1,200,000 payable quarterly at the rate of \$300,000 during 2003 and then an annual payment of \$1,350,000 payable quarterly at the rate of \$337,500 from 2004 thru 2008. UConn may terminate the Research Agreement upon 60 days written notice if it is unable to fulfill the terms of the Research Agreement. We can terminate the Research Agreement by giving 30 days written notice in the event that Dr. Srivastava terminates his employment by UConn or is otherwise unable to continue his research at UConn. Research and development expense in the accompanying 2003, 2002 and 2001 consolidated statements of operations includes approximately \$1,200,000, \$1,000,000, and \$1,000,000 in each of the respective years of costs incurred under the Research Agreement.

In May 2001, we entered into a License Agreement with UConn. Through the License Agreement, we obtained an exclusive worldwide license to patent rights resulting from inventions discovered under the Research Agreement for which we exercise our option. The term of the License Agreement ends when the last of the licensed patents expires (at least 2018) or becomes no longer valid. UConn may terminate the License Agreement: (1) if, after 30 days written notice, we fail to make any payments due under the License Agreement, or (2) we cease to carry on our business related to the patent rights or if we initiate or conduct actions in order to declare bankruptcy. We may terminate the License Agreement upon 90 days written notice. The License Agreement contains aggregate milestone payments of approximately \$1,200,000 for each product we develop covered by the licensed patent rights. These milestone payments are contingent upon regulatory filings, regulatory approvals, and commercial sales of products. We have also agreed to pay UConn a royalty on the net sales of products covered by the License Agreement as well as annual license maintenance fees beginning in May 2006. Royalties otherwise due on the net sales of products covered by the License Agreement may be credited against the annual license maintenance fee obligations. To date, we have paid approximately \$55,000 to UConn under the License Agreement. The License Agreement gives us complete discretion over the commercialization of products covered by the licensed patent rights but also requires us to use commercially reasonable diligent efforts to introduce commercial products within and outside the United States. If we fail to meet these due diligence requirements, UConn may be able to terminate the License Agreement.

In March 2003, we entered into an Amendment Agreement that amended certain provisions of both the Research Agreement and the License Agreement. The Amendment Agreement provides that any time we elect to exercise our option to license inventions discovered or developed as a result of research we sponsor at UConn, such inventions will be automatically covered under the terms of our existing License Agreement with UConn. In consideration for execution of the Amendment Agreement and for the license of additional patent rights, we agreed to pay UConn an up-front payment and to make future payments for each patent or patent application with respect to which we exercise our option under the Research Agreement. To date, we have paid approximately \$52,000 to UConn under the Amendment Agreement.

We entered into various additional research agreements with educational and medical institutions expiring between February 2001 and August 2005. These agreements require initial and quarterly payments



## ANTIGENICS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

totaling approximately \$3,128,000 (of which \$237,000, \$426,000 and \$890,000 was paid during the years ended December 31, 2003, 2002 and 2001 respectively, and \$1,000,000 remains committed).

We have entered into various agreements with institutions and contract research organizations to conduct our clinical studies. Under these agreements, subject to the enrollment of patients and performance by the institution of certain services, we have estimated our payments to be approximately \$46,342,000 over the term of the studies. For the years ended December 31, 2003, 2002, and 2001, approximately, \$12,180,000, \$7,902,000, and \$2,229,000 respectively, have been expensed in the accompanying consolidated statements of operations related to these clinical studies. The timing of our expense recognition and future payments related to these agreements is dependent on the enrollment of patients and documentation received from the institutions.

In December 2000, Aronex Pharmaceuticals, a company we acquired in July 2001, entered into a license agreement with Sumitomo Pharmaceuticals Co., Ltd., (the Sumitomo Agreement). The Sumitomo Agreement grants us the exclusive right to an issued U.S. patent that contains certain claims to the active ingredient in Aroplatin. Except for the treatment of hepatoma, the Sumitomo Agreement gives us the exclusive right to make, use, develop, import and sell Aroplatin in the United States. The term of the Sumitomo Agreement ends when the licensed patent expires. As the Sumitomo patent has not issued yet, the term of the Sumitomo Agreement would end 17 years after the date that the Sumitomo patent is issued. Either party may terminate the Sumitomo Agreement by giving written notice to the other party upon the occurrence of the following events: (1) if the other party makes an assignment for the benefit of creditors, is the subject of bankruptcy proceedings, or has a trustee or receiver appointed for substantially all of its assets, (2) if the other party becomes insolvent, or (3) if the other party defaults in its performance under the Sumitomo Agreement. Prior to our acquisition of Aronex Pharmaceuticals, Sumitomo received a \$500,000 up-front payment in 2001 from Aronex Pharmaceuticals and will receive subsequent milestone payments from us in the aggregate of up to \$3,500,000 if regulatory filings, regulatory approval and sales in connection with Aroplatin occur. We agreed to pay Sumitomo royalties on the net sales of Aroplatin in the United States upon commercialization of the product. The Sumitomo Agreement does not contain any due diligence provisions.

In June 1988, a predecessor to Aronex Pharmaceuticals entered into an exclusive license agreement with: (1) The Board of Regents of The University of Texas System, and (2) The University of Texas System Cancer Center, collectively referred to as the "University of Texas". As amended, the exclusive license agreement grants us the exclusive, worldwide license to patents containing claims that relate to Aroplatin. The term of the exclusive license agreement expires when the last licensed patent expires (2010). Either party may terminate the agreement upon 60-days written notice if the other party materially breaches any material terms of the exclusive license agreement. The agreement requires that we meet certain diligence provisions, specifically the conduct of ongoing and active research, developmental activities, marketing, clinical testing, or a licensing program, directed towards the production and sale of Aroplatin. If we fail to comply with these diligence provisions, the University of Texas may be able to terminate the exclusive license agreement upon 90-days written notice. The University of Texas also has the right to terminate the exclusive license agreement in the event that: (1) we discontinue our business, (2) we have a receiver or trustee appointed for our assets, or (3) we are the subject of a bankruptcy proceeding. We agreed to pay the University of Texas royalties on the net sales of Aroplatin. The applicable royalty percentage is dependent on the level of net sales of Aroplatin. We have also agreed to make a \$200,000 milestone payment to the University of Texas if the FDA approves a new drug application for Aroplatin. To date, we have not made any payments to the University of Texas under the exclusive license agreement.

## ANTIGENICS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

We have various comprehensive agreements with corporate partners that allow the partners to use our QS-21 adjuvant in numerous vaccines including, but not limited to, hepatitis, lyme disease, human immunodeficiency virus (HIV), influenza, cancer, and malaria. These agreements grant exclusive worldwide rights in some fields of use, and co-exclusive or non-exclusive rights in others. The agreements call for royalties to be paid to us by the partner on its future sales of licensed vaccines that include QS-21. Additionally, we entered into a license agreement with Neuralab limited, a wholly owned subsidiary of Elan Corporation, p.l.c., that grants exclusive, worldwide rights to use QS-21 with an undisclosed antigen in the field of Alzheimer's disease. We also signed a supply agreement for the adjuvant. Elan initiated a Phase IIA clinical trial of a product using QS-21 during 2001 and under the terms of our license agreement, we received a \$1,000,000 milestone payment. In March 2002, Elan halted the dosing of patients with this product after several patients experienced significant adverse side effects.

We have product development agreements and supply agreements with Virbac S.A. and a supply agreement with Virbac S.A.'s U.S. subsidiary that cover collaboration on the development of products for feline immune deficiency virus and the supply of vaccine and adjuvant for feline leukemia ("FeLV"). The supply agreement was up for renewal in July 2002, at which point we began to supply product to Virbac S.A. through month-to-month supply agreements. We are negotiating the sale of our manufacturing and certain intellectual property rights to the feline leukemia vaccine, conditioned on, among other things, the purchaser agreeing to manufacture QS-21 for us. Sales related to shipment of this product were \$3,465,000, \$2,627,000, and \$1,606,000 for the years ended December 31, 2003, 2002 and 2001, respectively.

#### (13) Related Party Transactions

We have paid certain administrative expenses on behalf of Founder Holdings Inc. and Antigenics Holdings L.L.C. Such transactions are recorded as a receivable from these affiliates. As of December 31, 2003 and 2002 these affiliates were indebted to us for approximately \$0, and \$17,000 respectively, for these expenses.

Garo H. Armen, Ph.D., our Chairman and Chief Executive Officer, is the non-executive Chairman of Elan Corporation, p.l.c., and a nominal employee of a different wholly-owned subsidiary of Elan. For the years ended December 31, 2003 and 2002, no revenues were earned under our agreements with these entities, mentioned above, and accordingly, at December 31, 2003, we had no amounts due to us under these agreements.

In March 1995, we entered into a consulting agreement with Dr. Pramod Srivastava, our scientific founder and one of our directors. This agreement expires in March 2005 but will be automatically extended for additional one-year periods unless either party decides not to extend the agreement. In 2003, we paid Dr. Srivastava a cash bonus of \$100,000 and granted him options to purchase shares of our common stock for services performed in 2002.

#### (14) Leases

We lease manufacturing, research and development, and office facilities under various long-term lease arrangements. Rent expense was approximately, \$5,176,000, \$3,788,000, and \$2,326,000 for the years ended December 31, 2003, 2002, and 2001, respectively.

## ANTIGENICS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

On December 6, 2002, we entered into a lease agreement, effective August 2003, to lease a 162,000 square foot facility in Lexington, Massachusetts. We began occupying approximately 94,000 square feet of this facility in October 2003. We plan to expand to 132,000 square feet on or before August 2005 with a second planned expansion to 162,000 square feet on or before March 2006. We have transferred our Woburn operations into this facility. Our Woburn manufacturing operations were transferred during the first quarter of 2004 and accordingly, the Woburn lease was extended through March 14, 2004. The future minimum rental payments under our leases of our Woburn, Framingham, and Lexington facilities, which expire in 2004, 2010, and 2013, respectively, our Texas facility which expires 2008, and our New York City headquarters, which expires in 2006, are as follows (in thousands):

Year ending December 31, 2004 .....	\$ 3,297
2005 .....	3,178
2006 .....	3,723
2007 .....	3,377
2008 .....	2,885
Thereafter .....	<u>10,992</u>
	<u>\$27,452</u>

In connection with the New York City office space and the Framingham and Lexington facilities we maintain fully collateralized letters of credit of \$78,000, \$375,000 and \$1,005,000 respectively. No amounts have been drawn on the letters of credit as of December 31, 2003.

Included in accrued liabilities and other long-term liabilities on the consolidated balance sheet at December 31, 2003 are amounts due under our non-cancelable lease (net of sub-lease income) of the manufacturing, research, and office facility located in The Woodlands, Texas assumed in the Aronex Pharmaceuticals merger (see Note 3). Remaining minimum payments (before sub-lease income) are: in 2004 through 2007 — \$578,000 per year; and \$48,000 for 2008.

Beginning in 2002, we have subleased part of our Framingham and Texas facilities and beginning in 2003, part of our New York office, and are currently entitled to receive income of approximately \$886,000, \$833,000, \$911,000, \$238,000 and \$20,000 for the years 2004, 2005, 2006, 2007 and 2008, respectively. For the year ended December 31, 2003 we received rental income of \$883,000 from our subleased facilities.

#### (15) Debt

As of December 31, 2003 we have approximately \$15,868,000 debt outstanding. The aggregate maturities of our outstanding debt for each of the years subsequent to December 31, 2003 are as follows 2004 — \$5,623,000, 2005 — \$5,733,000, 2006 — \$4,468,000, and 2007 — \$44,000.

On July 17, 2003, we entered into a \$17,100,000 debt facility with GE Capital pursuant to which we have drawn down \$17,042,000 to finance the build-out of our Lexington, Massachusetts facility. As we utilized the debt facility, separate promissory notes were executed. Each note has a term of thirty-six months with the interest rate based on the Federal Reserve's three year Treasury Constant Maturities Rate plus 1.875% fixed at the closing of each note, ranging from 3.92% to 4.42%. Each note is collateralized by a 50% cash security deposit (classified as restricted cash in the accompanying consolidated balance sheet at December 31, 2003)

**ANTIGENICS INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

as well as our fixed assets, accounts receivable, inventory and intangible assets excluding our intellectual property. As of December 31, 2003 we had approximately \$15,722,000 outstanding.

At December 31, 2003 and 2002, approximately \$146,000 of debentures we assumed in our merger with Aquila Biopharmaceuticals are outstanding. These debentures carry interest at 7% and are callable, accordingly they are classified as part of our short-term debt.

We had a \$5,000,000 credit facility from a financial institution pursuant to which we drew down amounts to made or refinance certain capital expenditures. As we utilized the credit facility, separate term notes were executed. Each term note had a term of forty-two months and the interest was fixed at the closing of each term loan (13.95% to 15.08%). Each term loan was collateralized by the equipment, fixtures, and improvements acquired with the proceeds of the loan. This credit facility expired in December 1999. At December 31, 2003, and 2002, \$0 and \$193,000, respectively, were due under this facility.

**(16) Contingencies**

In February 2001 we filed a complaint in the Superior Court of Middlesex County, Massachusetts, against 8 Cabot Road Inc. and 12 Cabot Road Inc. for breach of contract and against Susan F. Brand for breach of fiduciary duty for failure to return a \$350,000 deposit held in escrow in connection with a purchase and sale agreement for property to expand our Woburn facility. On March 26, 2003, the parties reached an agreement that extended the current lease term of our Woburn facility, at our current monthly rental rate, from August 2003 to November 2003 with an option to extend further to January 2004. Additionally, we agreed to let the defendants keep the \$350,000 security deposit and they have paid us the interest income that had been earned on the deposit as of March 26, 2003. The deposit is included in other current assets in the accompanying consolidated balance sheets at December 31, 2002 and beginning on March 26, 2003 was charged to operations over the remaining term of the lease, November 2003. The deposit has a \$0 balance at December 31, 2003. In December 2003 this lease was further extended to March 14, 2004.

Antigenics, our Chairman and Chief Executive Officer Garo Armen, and two investment banking firms that served as underwriters in our initial public offering have been named as defendants in a civil class action lawsuit filed on November 5, 2001 in the Federal District Court for the Southern District of New York on behalf of a class of purchasers of our stock between February 3, 2000 and December 6, 2000. Similar complaints were filed against about 300 other issuers, their underwriters, and in many instances their directors and officers. These cases have been coordinated under the caption *In re Initial Public Offering Securities Litigation*, Civ. No. 21 MC 92 (SAS), by order dated August 9, 2001. The suit against Antigenics and Dr. Armen alleges that the brokerage arms of the investment banking firms charged secret excessive commissions to certain of their customers in return for allocations of our stock in the offering. The suit also alleges that shares of our stock were allocated to certain of the investment banking firms' customers based upon agreements by such customers to purchase additional shares of our stock in the secondary market. The complaint alleges that Antigenics is liable under Section 11 of the Securities Act of 1933, as amended (the Securities Act), and Dr. Armen is liable under Sections 11 and 15 of the Securities Act because our registration statement did not disclose these alleged practices. On April 19, 2002, the plaintiffs in this action filed an amended class action complaint, which contains new allegations. Again, similar amended complaints were filed with respect to the other 300 companies. In addition to the claims in the earlier complaint, the amended complaint alleges that Antigenics and Dr. Armen violated Sections 10(b) and 20 of the Securities Exchange Act and SEC Rule 10b-5 by making false and misleading statements and/or omissions in order to

## ANTIGENICS INC. AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

inflate our stock price and conceal the investment banking firms' alleged secret arrangements. The claims against Dr. Armen, in his individual capacity, have been dismissed without prejudice. On July 15, 2002, Antigenics and Dr. Armen joined the Issuer Defendants' Motion to Dismiss the Consolidated Amended Complaints. By order of the Court, this motion set forth all "common issues," i.e., all grounds for dismissal common to all or a significant number of Issuer Defendants. The hearing on the Issuer Defendant's Motion to Dismiss and the other Defendants' motions to Dismiss was held on November 1, 2002. On February 19, 2003, the Court issued its opinion and order on the Issuer Defendants' Motion to Dismiss. The Court granted Antigenics motion to dismiss the Rule 10(b)-5 and Section 20 claims with leave to amend and denied our motion to dismiss the Section 11 and Section 15 claims. Currently, Antigenics, along with numerous other issuer companies, is in settlement discussions with plaintiffs and anticipates that a settlement will be reached without incurring significant out-of-pocket costs. At this time, we cannot make an estimate of possible loss, if any, related to this litigation.

On February 19, 2004, Jonathan Lewis, M.D., our former Chief Medical Officer, filed a complaint against us in the United States District Court for the Southern District of New York. The suit alleges that we terminated Dr. Lewis without cause and have failed to pay severance benefits to which Dr. Lewis believes he is entitled. The complaint seeks relief for breach of contract and intentional infliction of emotional distress. We intend to vigorously defend against these claims.

We currently are a party to other legal proceedings as well. While we currently believe that the ultimate outcome of any of these proceedings will not have a material adverse effect on our financial position, results of operations, or liquidity, litigation is subject to inherent uncertainty. Furthermore, litigation consumes both cash and management attention.

#### **(17) 401(k) Plan**

We sponsor a defined contribution 401(k) savings plan for all eligible employees, as defined. Participants may contribute up to 60% of their compensation, as defined, with a maximum of \$12,000 in 2003. Each participant is fully vested in his or her contributions and related earnings and losses. Effective January 1, 2001 we match 75% of the participant's contribution, and effective January 1, 2003, the percentage of participant compensation subject to our matching contribution was changed from 15% to 8% of compensation. Such matching contributions vest over four years. For the years ended December 31, 2003, 2002, and 2001, we charged approximately \$448,000, \$469,000, and \$464,000 to operations for the 401(k) plan.

#### **(18) Subsequent Events**

On February 6, 2004, pursuant to a Form S-3 Shelf Registration Statement filed in April 2003 with the Securities and Exchange Commission, we sold 5,000,000 shares of our common stock, \$0.01 par value, and we received net proceeds of approximately \$50,000,000.

On February 18, 2004, we sold an additional 400,000 shares of our common stock, \$0.01 par value, in conjunction with the aforementioned Form S-3 Shelf Registration statement, and we received net proceeds of approximately \$4,000,000.

**ANTIGENICS INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**(19) Quarterly Financial Data (Unaudited)**

	Three Months Ended,			
	<u>March 31</u>	<u>June 30</u>	<u>September 30</u>	<u>December 31</u>
	(In thousands, except per share data)			
2003				
Net sales .....	\$ 1,780	\$ 955	\$ 800	\$ 915
Gross profit .....	1,160	481	337	530
Net loss attributable to common stockholders .....	(13,492)	(16,619)	(17,794)	(18,253)
Net loss attributable to common stockholders per common share, basic and diluted .....	\$ (0.36)	\$ (0.42)	\$ (0.45)	\$ (0.46)
2002				
Net sales .....	\$ 858	\$ 779	\$ 970	\$ 805
Gross profit .....	567	409	639	459
Net loss attributable to common stockholders .....	(11,889)	(14,105)	(13,556)	(16,329)
Net loss attributable to common stockholders per common share, basic and diluted .....	\$ (0.37)	\$ (0.43)	\$ (0.41)	\$ (0.49)

**Item 9. *Changes in and Disagreements With Accountants on Accounting and Financial Disclosure***

Not Applicable.

**Item 9A. *Controls and Procedures***

Antigenics has established and maintains disclosure controls and procedures that are designed to provide reasonable assurance that material information is made known to the Chief Executive Officer and Chief Financial Officer by others within the Company. The Company has established a Management Disclosure Committee that is made up of key management employees and executives, which includes the Chief Financial Officer, and reports directly to the Chief Executive Officer, to monitor and evaluate these disclosure controls and procedures. The Company carried out an evaluation, under the supervision and with the participation of the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures are effective in providing reasonable assurance as of the end of the period covered in this report.

During the fourth quarter of 2003, there was no significant change in the Company's internal controls over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal controls over financial reporting.

**PART III**

**Item 10. *Directors and Executive Officers of the Registrant***

Portions of the response to this item is contained in part in Item 1A: "*Directors and Executive Officers of the Registrant*" of Part I of this Annual Report on Form 10-K and the remainder is incorporated from the discussion responsive thereto under the caption "Election of Directors" in our Proxy Statement relating to our 2004 Annual Meeting of Stockholders scheduled for May 26, 2004.

We have adopted a written code of business conduct and ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A copy of this code is available, free of charge, upon written request to our legal department at 630 Fifth Avenue, Suite 2100, New York, NY 10111. We intend to disclose on our website ([www.antigenics.com](http://www.antigenics.com)) any amendments to, or waivers from, our code of business conduct and ethics that apply to those officers. The contents of our website are not part of, or incorporated into, this document.

**Item 11. *Executive Compensation***

The response to this item is incorporated by reference into this Annual Report on Form 10-K from the discussion responsive thereto under the caption "Executive Compensation" in our Proxy Statement relating to our 2004 Annual Meeting of Stockholders scheduled for May 26, 2004.

**Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

The response to this item is incorporated by reference into this Annual Report on Form 10-K from the discussion responsive thereto under the caption "Principal Stockholders" in our Proxy Statement relating to our 2004 Annual Meeting of Stockholders scheduled for May 26, 2004.

**Item 13. *Certain Relationships and Related Transactions***

The response to this item is incorporated by reference into this Annual Report on Form 10-K from the discussion responsive thereto under the captions "Compensation Committee Interlocks and Insider participation" and "Certain Relationships and Related Transactions" in our Proxy Statement relating to our 2004 Annual Meeting of Stockholders scheduled for May 26, 2004.

**Item 14. *Principal Accountant Fees and Services***

The response to this item is incorporated by reference into this Annual Report on Form 10-K from the discussion responsive thereto under the caption "Information Concerning Auditors" in our Proxy Statement relating to our Annual Meeting of Stockholders scheduled for May 26, 2004.

**PART IV**

**Item 15. *Exhibits, Financial Statement Schedule and Reports on Form 8-K***

(a) 1. *Consolidated Financial Statements*

The consolidated financial statements are listed under Item 8 of this report.

2. *Consolidated Financial Statement Schedules*

The consolidated financial statement schedules required under this Item and Item 8 are omitted because they are not applicable or required information is shown in the consolidated financial statements or the footnotes thereto.

(b) Reports on Form 8-K

On the dates indicated the following Forms 8-K were filed with or furnished to the SEC:

On October 23, 2003, pursuant to which we furnished our press release dated October 23, 2003 announcing our financial results for the quarter ended September 30, 2003.

On November 4, 2003, pursuant to which we furnished our press release dated November 3, 2003 announcing certain executive management changes within the Company.

On November 25, 2003, pursuant to which we furnished our press release dated November 24, 2003 announcing the lifting of the partial clinical hold placed by the FDA on our two Phase III clinical trials.

On February 4, 2004, pursuant to which we filed (i) an underwriting agreement dated February 3, 2004 by and among Antigenics Inc. and UBS Securities LLC, Needham & Company, Inc. and Ryan Beck & Co., Inc. (ii) an opinion from our legal counsel.

On February 18, 2004, pursuant to which we announced the sale of 400,000 shares of common stock in connection with a partial exercise of an over-allotment option.

On February 19, 2004, pursuant to which we furnished our press release dated February 19, 2004 announcing our financial results for the year ended December 31, 2003.

(c) Exhibits



## Exhibit Index

<u>Exhibit No.</u>	<u>Description</u>
2.1	Agreement and Plan of Merger dated as of August 18, 2000, among Antigenics, St. Marks Acquisition Corp. and Aquila Biopharmaceuticals, Inc. Filed as Exhibit 99.1 to our Current Report on Form 8-K dated August 18, 2000 (File No. 000-29089) and incorporated herein by reference.
2.2	Agreement and Plan of Merger, dated as of April 23, 2001, among Antigenics, Nasa Merger Corp. and Aronex Pharmaceuticals, Inc. Filed as Exhibit 2.1 to our Current Report on Form 8-K (File No. 0-29089) dated April 23, 2001 and incorporated herein by reference.
3.1	Amended and Restated Certificate of Incorporation of Antigenics. Filed as Exhibit 3.1 to our Current Report on Form 8-K (File No. 0-29089) dated June 10, 2002 and incorporated herein by reference.
3.2	Amended and Restated By-laws of Antigenics Inc. Filed as Exhibit 3.2 to our Current Report on Form 8-K (File No. 0-29089) dated June 10, 2002 and incorporated herein by reference.
3.3	Certificate of Designation, Preferences and Rights of the Series A Convertible Preferred Stock of Antigenics Inc. filed with the Secretary of State of the State of Delaware on September 24, 2003. Filed as Exhibit 3.1 to our Current Report on Form 8-K (File No. 0-29089) dated September 25, 2003 and incorporated herein by reference.
4.1	Form of Common Stock Certificate. Filed as Exhibit 4.1 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
4.2	Form of Warrant to purchase Common Stock, together with a list of holders. Filed as Exhibit 4.2 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
4.4	Form of Debenture. Filed as exhibit 4.1 to the Current Report on Form 8-K of Aquila Biopharmaceuticals, Inc. (File No. 0-12081) and incorporated herein by reference.
4.5	Form of Common Stock Purchase Warrant. Filed as Exhibit 4.2 to the Current Report on Form 8-K (File No. 0-20111) of Aronex Pharmaceuticals, Inc. dated April 17, 2000 and incorporated herein by reference.
4.6	Form of Common Stock Purchase Warrant. Filed as Exhibit 4.3 to the Current Report on Form 8-K (File No. 0-20111) of Aronex Pharmaceuticals, Inc. dated April 17, 2000 and incorporated herein by reference.
4.7	Registration Rights Agreement dated August 2, 1989 by and among Aronex Pharmaceuticals, Inc. and certain of its stockholders. Filed as Exhibit 10.2 to the registration statement on Form S-1 (File No. 333-47418) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.8	First Amendment to Registration Rights Agreement dated April 18, 1990, by and among Aronex Pharmaceuticals, Inc. and certain of its stockholders. Filed as Exhibit 10.3 to the registration statement on Form S-1 (File No. 333-47418) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.9	Second Amendment to Registration Rights Agreement dated October 31, 1991, by and among Aronex Pharmaceuticals, Inc. and certain of its stockholders. Filed as Exhibit 10.4 to the registration statement on Form S-1 (File No. 333-47418) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.10	Third Amendment to Registration Rights Agreement, dated September 10, 1993, among Aronex Pharmaceuticals, Inc. and certain of its stockholders. Filed as Exhibit 10.24 to the registration statement on Form S-1 (File No. 333-71166) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.

<u>Exhibit No.</u>	<u>Description</u>
4.11	Fourth Amendment to Registration Rights Agreement dated January 20, 1994, among Aronex Pharmaceuticals and certain of its stockholders. Filed as Exhibit 10.5 to the Annual Report on Form 10-K/A for the year ended December 31, 1999 (File No. 0-20111) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.12	Form of Warrant to Purchase of Common Stock issued to Paramount Capital Inc. Filed as Exhibit 1.2 to the registration statement on Form S-1 (File No. 333-67599) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
4.13	Common Stock Purchase Warrant issued to Genzyme Corporation. Filed as Exhibit 10.3 to Current Report on Form 8-K (File No. 0-20111) of Aronex Pharmaceuticals, Inc. dated June 4, 1999 and incorporated herein by reference.
10.1*	1999 Equity Incentive Plan. Filed as Exhibit 10.1 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.2*	1999 Employee Stock Purchase Plan. Filed as Exhibit 10.2 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.3	Founding Scientist's Agreement between Antigenics and Pramod K. Srivastava, Ph.D. dated March 28, 1995. Filed as Exhibit 10.3 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.4	Form of Indemnification Agreement between Antigenics and its directors and executive officers. These agreements are materially different only as to the signatories and the dates of execution. Filed as Exhibit 10.4 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference. Current schedule identifying the directors and executive officers filed herewith.
10.5	Lease Agreement between Antigenics and Cummings Property Management, Inc. dated May 28, 1998, as amended on December 10, 1998. Filed as Exhibit 10.5 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.6(1)	Patent License Agreement between Antigenics and Mount Sinai School of Medicine dated November 1, 1994, as amended on June 5, 1995. Filed as Exhibit 10.8 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.7(1)	Sponsored Research and Technology License Agreement between Antigenics and Fordham University dated March 28, 1995, as amended on March 22, 1996. Filed as Exhibit 10.9 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.8(1)	Research Agreement between Antigenics and The University of Connecticut Health Center dated February 18, 1998. Filed as Exhibit 10.10 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.9(1)	License Agreement between Antigenics and Duke University dated March 4, 1999. Filed as Exhibit 10.11 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.10(1)	License Agreement between Antigenics and University of Miami dated April 12, 1999. Filed as Exhibit 10.12 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.11*	Antigenics 401(k) Plan. Filed as Exhibit 10.17 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.12*	Antigenics L.L.C. Incentive Equity Plan. Filed as Exhibit 10.18 to our registration statement on Form S-1 (File No. 333-91747) and incorporated herein by reference.
10.13	Subscription Agreement dated May 18, 2000 between Antigenics and Applied Genomic Technology Capital Fund L.P. Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q (File No. 0-29089) for the quarter ended June 30, 2000 and incorporated herein by reference.

<u>Exhibit No.</u>	<u>Description</u>
10.14	Assignment Agreement among RCPI Trust, GHA Management Corporation and Antigenics dated August 24, 2000. Filed as Exhibit 10.20 to our registration statement on Form S-4 (File No. 333-46168) and incorporated herein by reference.
10.15	Lease Agreement by and between Aquila Biopharmaceuticals, Inc. and NDNE 9/90 Corporate Center LLC effective September 9, 1998. Filed as Exhibit 10.2 to Amendment No. 1 to registration statement on Form S-3 of Aquila Biopharmaceuticals, Inc. (File No. 333-46641) and incorporated herein by reference.
10.16(1)	Exclusive License Agreement, dated October 15, 1986, between Aronex Pharmaceuticals, Inc., The University of Texas System Board of Regents and The University of Texas M.D. Anderson Cancer Center. Filed as Exhibit 10.8 to the registration statement on Form S-1 (File No. 333-47418) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
10.17(1)	Exclusive License Agreement, dated July 1, 1988, between Aronex Pharmaceuticals, The University of Texas System Board of Regents and The University of Texas M.D. Anderson Cancer Center, together with amendments and extensions thereto. Filed as Exhibit 10.10 to the registration statement on Form S-1 (File No. 333-47418) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
10.18(1)	Amendment No. 2 to Exclusive License Agreement, dated July 9, 1993, among Aronex Pharmaceuticals, The University of Texas System Board of Regents and The University of Texas M.D. Anderson Cancer Center. Filed as Exhibit 10.20 to the registration statement on Form S-1 (File No. 333-71166) of Aronex Pharmaceuticals, Inc. and incorporated herein by reference.
10.19(1)	License Agreement, dated December 12, 2000 between Aronex Pharmaceuticals and Sumitomo Pharmaceuticals Co., Ltd. Filed as Exhibit 10.1 to the Current Report on Form 8-K (File No. 0-20111) of Aronex Pharmaceuticals, Inc. dated December 12, 2000 and incorporated herein by reference.
10.20	Sublease Agreement between Antigenics Inc., a Massachusetts corporation (formerly Aquila Biopharmaceuticals, Inc.) and wholly owned subsidiary of Antigenics, and GTC Biotherapeutics, Inc. dated July 16, 2002. Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q (File No. 0-29089) for the quarter ended June 30, 2002 and incorporated herein by reference.
10.21	Lease of Premises at 3 Forbes Road, Lexington, Massachusetts dated as of December 6, 2002 from BHX, LLC, as Trustee of 3 Forbes Realty Trust, to Antigenics. Filed as Exhibit 10.1 to our Current Report on Form 8-K (File No. 0-29089) dated December 6, 2002 and incorporated herein by reference.
10.22	Master Security Agreement dated July 17, 2003, between General Electric Capital Corporation and Antigenics Inc. Filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q (File No. 0-29089) for the quarter ended June 30, 2003 and incorporated herein by reference.
10.23	Amendment No. 1 to Antigenics Inc. 1999 Equity Incentive Plan. Filed as Exhibit 4.1 to our Current Report on Form 8-K (File No. 0-29089) dated June 11, 2003 and incorporated herein by reference.
10.24	Antigenics Inc. Directors' Deferred Compensation Plan. Filed as Exhibit 4.2 to our Current Report on Form 8-K (File No. 0-29089) dated June 11, 2003 and incorporated herein by reference.
10.25(1)	Amendment to Founding Scientist's Agreement dated January 1, 2003. Filed as Exhibit 10.29 to our Annual Report on Form 10-K (File No. 0-29089) for the year ended December 31, 2003 and incorporated herein by reference.
10.26(1)	Amendment No. 1 of Research Agreement between Antigenics and the University of Connecticut Health Center dated April 19, 2002. Filed as Exhibit 10.30 to our Annual Report on Form 10-K (File No. 0-29089) for the year ended December 31, 2003 and incorporated herein by reference.

<u>Exhibit No.</u>	<u>Description</u>
10.27(1)	Amendment No. 2 of Research Agreement between Antigenics and the University of Connecticut Health Center dated December 31, 2003. Filed herewith.
21	Subsidiaries of Antigenics. Filed herewith.
23	Consent of KPMG LLP, independent accountants. Filed herewith.
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

\* Indicates a management contract or compensatory plan.

- (1) Certain confidential material contained in the document has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended or Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ANTIGENICS INC.

By: /s/ GARO H. ARMEN, PH.D.

Garo H. Armen, Ph.D.

Name: Garo H. Armen, Ph.D.

Title: *Chief Executive Officer and  
Chairman of the Board*

Dated: March 15, 2004

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant in the capacities indicated as of March 15, 2004.

<u>Signature</u>	<u>Title</u>
<u>/s/ GARO H. ARMEN, PH.D.</u> Gar H. Armen, Ph.D.	Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)
<u>/s/ JEFF D. CLARK</u> Jeff D. Clark	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
<u>/s/ NOUBAR AFEYAN, PH. D.</u> Noubar Afeyan, Ph.D	Director
<u>/s/ FRANK V. ATLEE III</u> Frank V. AtLee III	Director
<u>/s/ GAMIL DE CHADAREVIAN</u> Gamil de Chadarevian	Director, Vice Chairman of the Board
<u>/s/ TOM DECHAENE</u> Tom Dechaene	Director
<u>/s/ MARGARET EISEN</u> Margaret Eisen	Director
<u>/s/ WADIH JORDAN</u> Wadih Jordan	Director
<u>/s/ MARK KESSEL</u> Mark Kessel	Director
<u>/s/ PRAMOD SRIVASTAVA, PH.D.</u> Pramod Srivastava, Ph.D.	Director

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## NOTES

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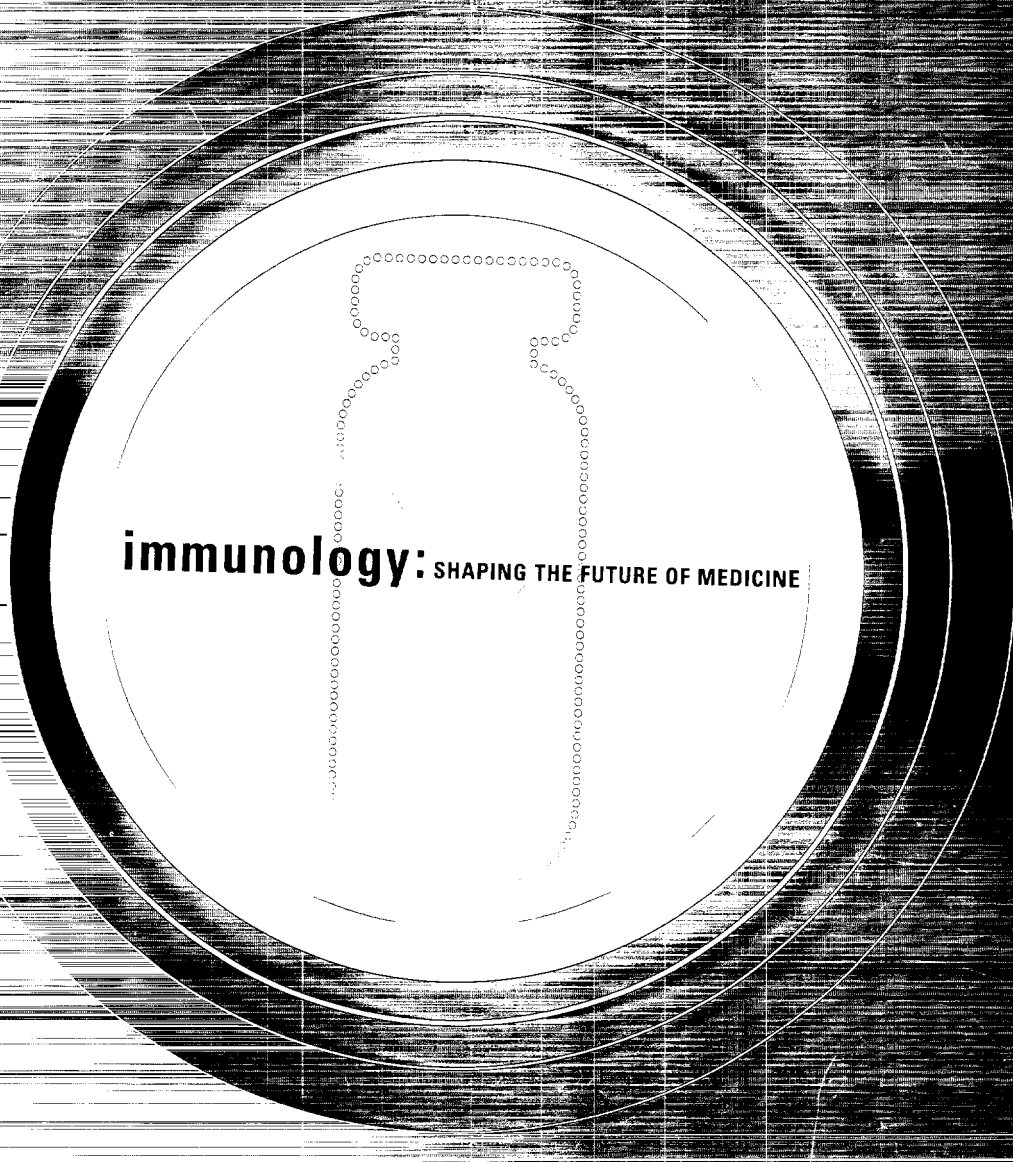


smart science. smart medicine.

**ANTIGENICS INC.**

AR 2003 | NASDAQ: AGEN

CANCER | INFECTIOUS DISEASES | AUTOIMMUNE DISORDERS



**immunology:** SHAPING THE FUTURE OF MEDICINE

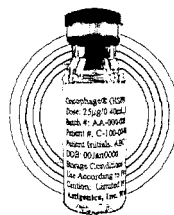
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Natural forces within us are the true healers of disease.  
—HIPPOCRATES

Moments of profound discovery are rare. An elegant insight years ago into how the human body recognizes and fights disease has since evolved into an entirely new vision of patient care – one that begins and ends in the cells within the patient's own body.

smart science.



smart medicine.

On behalf of patients with limited treatment options, Antigenics is working to harness the power of the patient's own immune system to battle diseases that have no cures. Unwavering commitment, relentless focus, one patient at a time.

# A Conversation

WITH PRAMOD SRIVASTAVA, PhD, ANTIGENICS' FOUNDING SCIENTIST



"The immune system is the most efficient and effective disease-fighting tool there is – provided it can recognize the threat and be stimulated to fight it."

## HSP Technology Q&A

**Antigenics' core technology is based on the research you've been conducting for the past 25 years.**

**Exactly what are heat shock proteins and why are they so important?**

Heat shock proteins are among the most abundant proteins in all life forms. They exist in every cell in the body, including cancerous or infected cells. One of their functions is to act as 'chaperones' for proteins, helping the proteins survive environmental stresses. They also appear to facilitate the presentation of pieces of proteins – or peptides – on the cell surface, which helps the immune system recognize and respond to diseased cells.

**So the body's own immune system can fight cancer?**

The immune system is the most efficient and effective disease-fighting tool there is – provided it can recognize the threat and be stimulated to fight it. Tumor cells often secrete substances to suppress the immune system, they can mutate or hide their antigens – they have all sorts of tricks for evading detection. So the challenge in immunotherapy is to help the immune system overcome these tricks so that it can better 'see' the cancer as a threat.

**Does HSP technology help the immune system 'see' the cancer?**

Our HSP-based cancer immunotherapeutics, such as Oncophage and AG-858, were designed to do exactly that. They are autologous (derived from each patient's cancer) and consist of complexes of HSPs and peptides purified from patients' own cancer cells. This is meant to capture the unique antigenic 'fingerprint' of the patient's cancer, which contains both normal peptides found in healthy cells as well as abnormal ones produced by malignant cells. It is the abnormal tumor- and patient-specific peptides that trigger an immune response against cancer cells bearing that fingerprint. Our approach entails purifying the fingerprint from patients and re-introducing it to the

body in the form of a vaccine, which is designed to activate the immune system to better 'see' and target the patient's cancerous cells.

**What is the advantage of such uniquely personalized vaccines?**

Evidence from mouse and human cancers continues to show that each patient's cancer is unique in terms of its antigenicity. Such evidence was restricted to chemically induced mouse tumors for a long time, but today, the evidence from human cancers is perhaps just as strong – if not stronger. In therapeutic vaccination against cancer, and perhaps in much of future medicine, personalization is going to be the key.

**Are there side effects?**

In about 700 patients who have received Oncophage or AG-858 to date, the safety profile of both vaccines appears favorable. Unlike chemotherapy or radiation therapy, which affect both healthy and diseased cells, our vaccines are, by their very nature, designed to target only diseased cells. Furthermore, the vaccines are given as a simple injection on an outpatient basis and thus minimize disruption of a patient's everyday life.

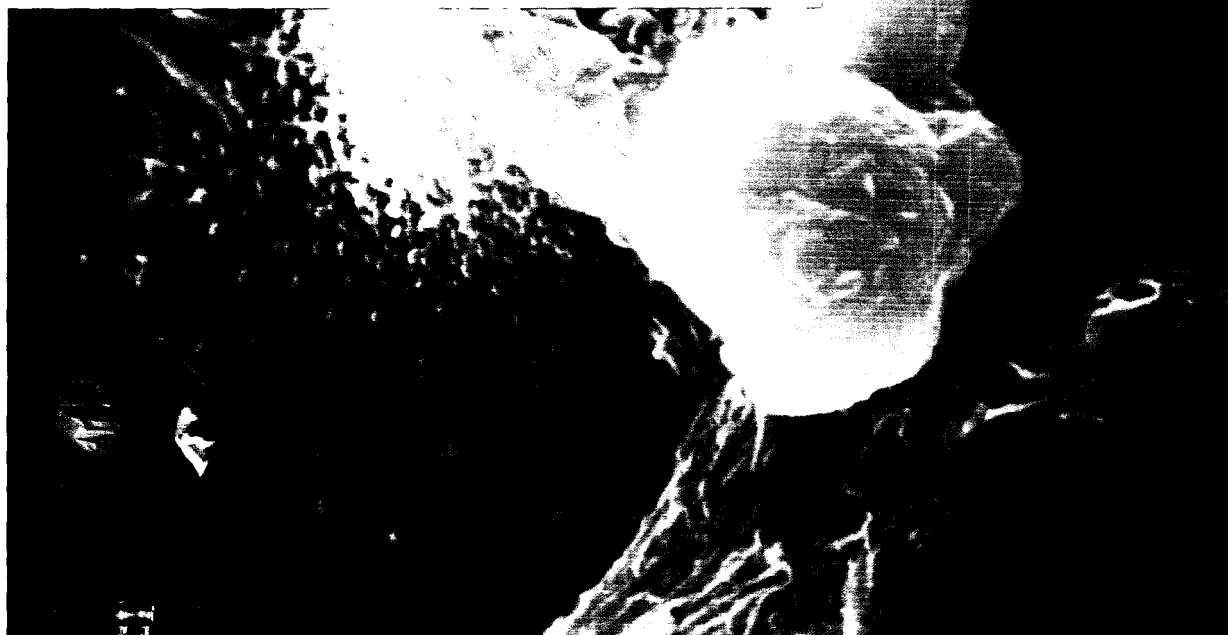
**Are there any types of cancers that can't be treated with HSP technology?**

Not really. HSP technology has the potential to treat every single type of cancer. And beyond cancers, there is enormous promise in nonpersonalized HSP-based immunotherapies in the treatment of a number of infectious diseases.

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# ONCOPHAGE

AUTOLOGOUS HSP-BASED CANCER VACCINE



The dilemma of most traditional cancer treatments is that what limited efficacy they offer often comes at the steep price of toxic side effects. Based on Antigenics' proprietary heat shock protein technology, Oncophage® (HSPPC-96) is a personalized vaccine designed to treat a patient's specific cancer without the toxic side effects that diminish the patient's quality of life. Potentially applicable to all cancer types, it is currently being evaluated in Phase III clinical trials for treatment of renal cell carcinoma (kidney cancer) and metastatic melanoma. A recent interim analysis of the Phase III kidney cancer trial indicates that patient accrual goals are on target, that the trial design is sound, and that there are no safety concerns with the vaccine.

### **How Science Becomes Medicine**

Oncophage turns cancer against itself, using individual patients' tumors as the raw material from which to make the vaccines. The cancerous tissue is removed, and a portion is sent overnight to Antigenics' state-of-the-art manufacturing facility in Lexington, MA. Using a proprietary process, the heat shock protein gp96 and its associated peptides are isolated from the tumor. The complexes from each sample are extracted, purified and vialled, then subject to rigorous quality assurance testing.

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By targeting only the cells that bear the cancer's fingerprint, Oncophage is designed to leave healthy cells alone, thereby greatly minimizing side effects.

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### **A Cancer's Fingerprint**

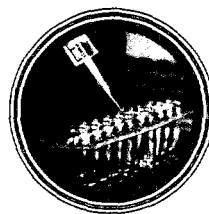
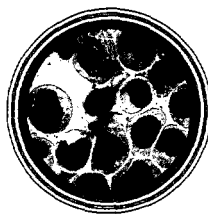
Because Oncophage is derived from each patient's specific cancer, it contains the antigens specific to the patient's own cancer. When injected, the vaccine is designed to present that unique antigenic 'fingerprint' to the body's immune system to stimulate activation of T cells specifically against the cancer. By targeting only the cells that bear the cancer's fingerprint, Oncophage is designed to leave healthy cells alone, thereby greatly minimizing side effects.

### **Independent Validation**

Data from numerous publications and presentations at leading medical conferences indicate that vaccination with Oncophage may be associated with clinical benefit. Results from two Phase II studies presented at the 2003 annual meeting of the American Society of Clinical Oncology showed that treatment with Oncophage was associated with clinical and immune response in both kidney cancer and non-Hodgkin's lymphoma. A featured article last August in *Clinical Cancer Research* described findings from a Phase II study of Oncophage in metastatic colorectal cancer in which more than half of the patients who received Oncophage demonstrated significant immunological response. Moreover, immunological data published last October in *The Journal of Immunology* showed that a significant cancer-specific immune response was observed among patients receiving Oncophage. Study researchers also found that this immunological mechanism of action – considered to play a key function in immune responses to tumors and viruses – was the same for both melanoma and colorectal cancer.

# AG-858

AUTOLOGOUS HSP-BASED CANCER VACCINE



Also built on Antigenics' founding technology, AG-858 is a personalized HSP-based vaccine being evaluated in combination treatment for chronic myelogenous leukemia (CML). CML is a slowly progressing cancer of the blood characterized by a proliferation of abnormal white blood cells, and affects more than 4,000 Americans a year. One of the principal treatments today is Gleevec® (imatinib mesylate, Novartis\*), an oral agent that is believed to interfere with the action of the abnormal enzyme found in CML white blood cells.

## **The Same. But Different.**

Though developed from the same HSP technology as Oncophage, AG-858 uses a different heat shock protein, HSP70. To create AG-858, the patient undergoes a blood-filtering process called leukapheresis to collect the white blood cells that are sent to Antigenics for manufacture of the patient's unique vaccine. As with Oncophage, AG-858 is designed to present that individual cancer's unique antigenic 'fingerprint' to the patient's immune system to stimulate a specific, T cell-mediated immune response.

## **Proof of Principle**

Data from an ongoing pilot study being conducted at the University of Connecticut of an earlier HSP70-based vaccine, HSPPC-70, in combination with Gleevec were presented at the American Society of Hematology meeting last December. Researchers observed that of the 17 evaluable patients with chronic phase CML, 11 experienced clinical response. Furthermore, the majority of patients evaluated for immunological response (nine out of 11) demonstrated an increased level of interferon gamma-producing cells, a specialized type of immune cell crucial in fighting cancers and infections. HSPPC-70 vaccines were successfully prepared for all patients and were well tolerated in the study.

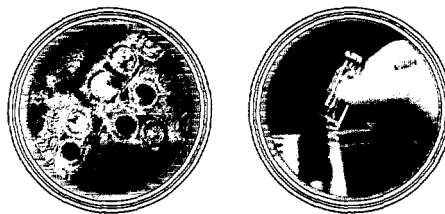
## **Phase II Clinical Trial**

Based on encouraging findings from the HSPPC-70 trial, Antigenics has initiated a Phase II exploratory trial of combination treatment with AG-858 and Gleevec to evaluate cytogenetic response in chronic phase CML patients who are already on Gleevec therapy. Data from the trial, which involves 40 patients in medical centers in both the United States and United Kingdom, are expected later this year.

\*[www.novartis.com](http://www.novartis.com)



# AG-707



## HSP-BASED VACCINE FOR GENITAL HERPES TREATMENT

The virus that causes genital herpes, herpes simplex virus type 2 (HSV-2), affects more than 45 million Americans and millions more worldwide. Recent reports indicate that up to 500,000 new cases of genital herpes occur each year in the United States, with up to one in five Americans already infected. In addition, genital herpes is associated with more serious sexually transmitted diseases, especially HIV, because pathogens can gain easy access to the body through herpes lesions, which can recur as many as eight times a year. AG-702/AG-707 is a therapeutic vaccine program for the treatment of genital herpes, and represents Antigenics' first off-the-shelf application of its HSP technology.

### A Different Approach

Similar to Antigenics' cancer vaccines, AG-702 and AG-707 consist of HSP-peptide complexes. However, unlike Oncophage and AG-858, AG-702 and AG-707 are designed to be off-the-shelf products – not individualized. Because the antigenic profile of HSV-2 is nearly identical in all patients, personalization of the genital herpes vaccines is not required.

### Feasibility Data

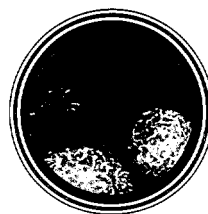
AG-702, a monovalent (single-antigen) vaccine that consists of recombinant HSP complexed to a synthetic peptide derived from the HSV-2 virus, is currently being evaluated in a Phase I, proof-of-principle study at The University of Washington. The dose-escalation trial involves both healthy volunteers and genital herpes patients, and will assess feasibility and safety.

### The Next Generation

Antigenics is developing AG-707, a multivalent (comprised of multiple antigens) successor to the monovalent AG-702 vaccine. AG-707 contains 49 HSV-2 peptides, and is designed to address HSV-2 infection in a broad population of patients. The company intends to file an investigational new drug (IND) application for AG-707 and plans to begin clinical research sometime this year.

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# AROPLATIN



THIRD-GENERATION PLATINUM CHEMOTHERAPEUTIC

Aroplatin™ is a novel, liposome-encapsulated diaminocyclohexane (DACH) platinum compound that holds promise in the treatment of solid tumor types, especially those that have typically resisted traditional platinum agents.

## The Platinum Problem

Platinum chemotherapeutics are cancer drugs containing platinum, which has been shown to have some anticancer effects. Platinum-based therapies such as carboplatin and cisplatin can have both efficacy and toxicity issues. Although they do exhibit activity against solid tumors, some tumors either are resistant to them or become resistant during treatment. Furthermore, these agents can be associated with toxicities that can be so severe as to limit treatment.

## A New Kind of Platinum

Preclinical research indicates that compared with other platinum compounds, Aroplatin may demonstrate improved anticancer activity; reduced toxicity; and broad applicability, including in traditionally platinum-insensitive cancers such as colorectal cancer. It is currently being evaluated as a monotherapy in a Phase II trial in colorectal cancer and a Phase I/II trial in advanced solid tumors. Before initiating additional clinical trials of Aroplatin, Antigenics plans to investigate a range of improved formulations in order to enhance the convenience of use, and efficacy of Aroplatin in multiple cancer indications.

ANTIGENICS PIPELINE | ○ CANCER ● INFECTIOUS DISEASES ○ AUTOIMMUNE DISORDERS

### PHASE III

RENAL CELL CARCINOMA

MELANOMA

### PHASE II

COLORRECTAL CANCER<sup>1</sup>

AS-838 CHRONIC MYELOGENOUS LEUKEMIA

LYMPHOMA<sup>1</sup>

ARND-20016 COLORRECTAL CANCER<sup>2</sup>

GASTRIC CANCER<sup>1</sup>

### PHASE I/II

PANCREATIC CANCER<sup>1</sup>

GENITAL HERPES

QS-21 ALZHEIMER'S DISEASE

<sup>1</sup>CLOSED TO ENROLLMENT

<sup>2</sup>NEW CLINICAL TRIALS WILL NOT BE INITIATED UNTIL REVIEW OF THE AROPLATIN PROGRAM IS COMPLETE.

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# LEXINGTON

THE NEW FACILITY IN LEXINGTON, MASSACHUSETTS



In late 2003, Antigenics began moving into a new, customized facility in Lexington, MA, for research, clinical and manufacturing operations. Intended as the company's commercial launch facility, the new building is designed to allow ample room for growth as well as to facilitate strictest compliance with global current Good Manufacturing Practices (cGMP) guidelines.

## **More of Everything**

The two-story, 162,000-square-foot property provides more space for virtually every facet of a growing biotech company, including clinical research and development facilities, manufacturing suites, quality control laboratories, and critical support areas. But more importantly, it provides an additional level of control over all aspects of the environment – from the air to the water to the workstations. Currently leasing approximately 94,000 square feet of the facility, Antigenics plans to expand to 132,000 square-feet by late next year, with a second expansion to 162,000 square-feet in 2006.

## **Built-in Optimism**

The new facility features a built-in expansion capability, with infrastructure already in place. Currently geared to produce up to 10,000 lots of vaccine, manufacturing operations are rapidly expandable to 10 times the current production capacity so that Antigenics may deliver vaccine to patients as quickly as possible upon product commercialization.

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# RESEARCH

RESEARCH AND DEVELOPMENT PROGRAMS



Research and development are vital to Antigenics' mission of developing targeted immunotherapeutics and other revolutionary treatments. The company's core HSP technology is being explored to identify and develop innovative applications in a broad range of disease areas. Existing products are continually evaluated for optimal formulation and treatment strategies. Novel immunomodulators have been discovered and assessed for potential clinical applications. At Antigenics there is a profound appreciation for the importance of R&D, an inherent understanding that only with a robust R&D pipeline will it be possible to offer treatment options to thousands of patients with serious unmet medical needs.

### **Oncophage in Combination**

To assess the potential utility of Oncophage beyond the adjuvant treatment setting, Antigenics is collaborating with several major pharmaceutical companies on preclinical research to evaluate combination treatment with Oncophage. The effect of the addition of Oncophage to certain chemotherapies or biological agents will be studied in animal models of a variety of cancer types. Positive findings may serve as a strong basis for exploratory clinical trials of Oncophage in combination cancer treatment for more advanced levels of disease. Preliminary data from preclinical studies are expected later this year.

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The company's core HSP technology is being explored to identify and develop innovative applications in a broad range of disease areas.

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### **Building on Innovation**

The elegance of Oncophage is that it is designed to use the patient's own tumor to train the immune system to fight that same tumor. But due to minimum tumor-size requirements, Oncophage cannot be generated from smaller or earlier-stage tumors using current manufacturing techniques. Although smaller tumors do not contain as much heat shock protein, they are believed to contain sufficient quantities of antigens. The next generation of Oncophage, currently demonstrating encouraging results in animal studies being conducted by Antigenics' academic partners, involves extracting these antigens and combining them with recombinant (not autologous) HSP. Antigenics hopes to file an investigational new drug (IND) application for next-generation Oncophage in the next 12 months.

### **New Pathways**

The discovery of the HSP receptor CD91 has led to a new understanding of the critical molecular pathways involved in immune system regulation. Research indicates that CD91 acts as a powerful on/off switch for the immune system, particularly for the activation of 'killer' T cells. Thus, Antigenics continues to investigate CD91 and other HSP receptor pathways with the ultimate goal of blocking pathogenic types of immune response. Using HSP receptors to develop antagonists of HSP interaction may have applications in the treatment of autoimmune diseases such as arthritis, multiple sclerosis and type 1 diabetes.

# Chairman's Letter

GARO ARMEN, PhD, ANTIGENICS' CHAIRMAN AND CHIEF EXECUTIVE OFFICER



"We are working hard to ensure that we deliver on the promise of our revolutionary technology."

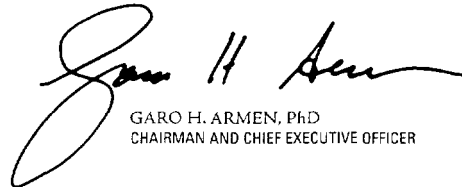
Having made great strides in 2003 in every critical aspect of developing a new generation of innovative medicines, Antigenics is now equipped with all the factors critical to our success as we progress further towards product commercialization. During the year, we demonstrated our ability to continue moving our products forward, showed a quick and sure ability to respond to difficulties inherent in drug development, and started building the commercial infrastructure that will be required to bring the first personalized cancer vaccine to patients currently facing limited or no treatment options.

In December 2003, we achieved a major milestone for the company – the successful completion of an independent interim analysis of our Phase III trial of Oncophage for treatment of renal cell carcinoma in the adjuvant setting. The independent review found that patient accrual goals did not need to be changed, that the design and conduct of the trial were sound, and that there were no safety concerns – all very encouraging signs.

Similarly, we made significant progress in our regulatory filings with the FDA. In response to the agency's request for additional product characterization information and partial clinical hold on two Phase III trials of Oncophage, our team worked hard to provide the information within our targeted timelines. Antigenics was able to address the agency's issues and have the hold lifted in just 13 weeks, which represents the fastest time that a clinical hold with an autologous product has been resolved to the satisfaction of the FDA.

Financially, we had a stronger year-end cash balance in 2003 than in the last two years – despite being in a high-growth phase of our operation. In addition, we raised about \$54 million in a public offering at the beginning of this year. These funds will be used to begin developing our commercial infrastructure and to expand our manufacturing, regulatory and clinical efforts. They will provide us with working capital and allow us to launch other priority programs such as filing investigational new drug (IND) applications for AG-707 and next-generation Oncophage; initiating clinical trials in lung cancer, breast cancer and genital herpes; and assessing Oncophage in combination treatment settings. We are on track to complete the Phase III RCC trial this year as well as to complete enrollment for our Phase III metastatic melanoma trial. In addition, we expect to receive data from several of our other trials, including the Phase II study of AG-858 in CML, by year-end.

Clearly, we have our eye on commercialization. With a new, rapidly expandable manufacturing facility and an expanded depth of regulatory and development experience in our management team, we are working hard to ensure that we deliver on the promise of our revolutionary technology. By developing innovative therapeutic solutions that selectively harness the power of the immune system, the people of Antigenics are determined to deliver a new generation of treatment alternatives to patients and physicians alike.



GARO H. ARMEN, PhD  
CHAIRMAN AND CHIEF EXECUTIVE OFFICER

# FINANCIALS

## RECAPPING THE YEAR'S FINANCIAL RESULTS

We have derived the consolidated balance sheet data set forth below as of December 31, 2003, and 2002, and the consolidated statement of operations data for each of the years in the three-year period ended December 31, 2003, from our audited consolidated financial statements included elsewhere in this annual report. We have derived the consolidated balance sheet data as of December 31, 2001, 2000, 1999, and the consolidated statement of operations data for the years ended December 31, 2000, and 1999, from our audited consolidated financial statements, which are not included in this annual report. These consolidated financial statements have been audited by KPMG LLP, independent auditors.

You should read the selected consolidated financial data in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the notes to those consolidated financial statements included elsewhere in this report.

Given our history of incurring operating losses, management believes that it is more likely than not that any deferred tax assets, net of deferred tax liabilities, will not be realized. Therefore, there is no income tax benefit in the consolidated financial statements for periods ended after February 2000 because of a loss before income taxes and the need to recognize a valuation allowance on net deferred tax assets (see (2), next page).

Changes in cash, cash equivalents and short-term investments, total current assets, total assets, and stockholders' equity in the periods presented below include the effects of the receipt of net proceeds from our equity offerings, the exercise of stock options and warrants, and employee stock purchases that totaled approximately \$92.5 million, \$56.7 million, \$0.9 million, \$66.8 million and \$41.1 million in 2003, 2002, 2001, 2000 and 1999, respectively.



(in thousands, except per share data)

	2003	2002	2001	2000	1999
<b>CONSOLIDATED STATEMENT OF OPERATIONS DATA:</b>					
Revenue	\$ 4,450	\$ 3,412	\$ 4,555	\$ 443	\$ 581
Operating expenses:					
Cost of goods sold	(1,942)	(1,337)	(1,064)	(363)	—
Research and development	(48,527)	(39,983)	(31,357)	(17,575)	(11,958)
General and administrative	(21,717)	(19,467)	(13,762)	(9,190)	(7,480)
Acquired in-process research and development <sup>(1)</sup>	—	—	(34,596)	(25,800)	—
Loss from operations	(67,735)	(57,375)	(76,224)	(52,485)	(18,857)
Interest income, net	919	1,225	2,683	5,756	723
Non-operating income	883	272	—	—	10
Net loss	(65,934)	(55,878)	(73,541)	(46,729)	(18,124)
Dividends on Series A Convertible Preferred Stock	(224)	—	—	—	—
Net loss attributable to common stockholders <sup>(2)(3)(4)</sup>	\$(66,158)	\$(55,878)	\$(73,541)	\$(46,729)	\$(18,124)
Net loss attributable to common stockholders per common share, basic and diluted	\$ (1.70)	\$ (1.70)	\$ (2.61)	\$ (1.90)	\$ (1.00)
Weighted average number of shares outstanding, basic and diluted	38,989	32,905	28,143	24,659	18,144

(in thousands)

	2003	2002	2001	2000	1999
<b>CONSOLIDATED BALANCE SHEET DATA:</b>					
Cash, cash equivalents and short-term investments	\$ 89,478	\$ 58,725	\$ 60,868	\$ 99,139	\$ 46,418
Total current assets	93,322	63,400	63,987	101,593	47,672
Total assets	140,080	89,063	93,546	127,966	56,004
Total current liabilities	22,105	9,971	16,208	8,611	2,171
Long-term liabilities, less current portion	12,729	1,335	1,414	2,651	2,155
Stockholders' equity	105,246	77,757	75,925	116,703	51,678

(1) We recorded charges to operations for the write-off of in-process research and development acquired in our mergers with Aquila Biopharmaceuticals Inc. in November 2000 and with Aronex Pharmaceuticals Inc. in July 2001.

(2) Prior to our conversion from a limited liability company to a corporation in February 2000, in accordance with federal, state, and local income tax regulations which provide that no income taxes are levied on United States limited liability companies, each member of the limited liability company was individually responsible for reporting his share of the company's net income or loss. Accordingly, we have not provided for income taxes in our consolidated financial statements for periods before February 2000. Given our history of incurring operating losses, no income tax benefit is recognized in our consolidated financial statements for periods after February 2000 because of a loss before income taxes and the need to recognize a valuation allowance on net deferred tax assets.

(3) Effective July 1, 2001, we adopted Statement of Financial Accounting Standards (SFAS) No. 141, "Business Combinations" and effective January 1, 2002, adopted SFAS No. 142, "Goodwill and Other Intangibles." As a result, we have ceased amortization of all goodwill beginning January 1, 2002. Had SFAS No. 142 been adopted by us effective January 1, 2000, net loss and net loss attributable to common stockholders and net loss attributable to common stockholder per common share, basic and diluted, would have been as follows (in thousands, except per share data):

	2001	2000
Net loss attributable to common stockholders, as reported	\$(73,541)	\$(46,729)
Goodwill and assembled workforce amortization	480	39
Pro forma net loss attributable to common stockholders	\$(73,061)	\$(46,690)
Net loss attributable to common stockholders per common share, basic and diluted:		
As reported	\$ (2.61)	\$ (1.90)
Pro forma	(2.60)	(1.89)

(4) Effective January 1, 2003, we adopted SFAS No. 143 "Accounting for Asset Retirement Obligations." As a result, we have recorded the fair value of an asset retirement obligation of long-lived assets and the corresponding capitalized cost, effective January 1, 2003. Had SFAS No. 143 been in effect for the years presented below, net loss attributable to common stockholders per common share, basic and diluted, would have been as follows (in thousands, except per share data):

Year ended December 31,	2002	2001
Net loss attributable to common stockholders, as reported	\$(55,878)	\$(73,541)
Depreciation expense	(43)	(43)
Accretion expense	(18)	(17)
Pro forma net loss attributable to common stockholders	\$(55,939)	\$(73,601)
Net loss attributable to common stockholders per common share, basic and diluted:		
As reported	\$ (1.70)	\$ (2.61)
Pro forma	(1.70)	(2.62)

The pro forma liability for asset retirement obligations would have been as follows (in thousands):

December 31,	2002
Long-term liabilities, less current portion, as reported	\$ 1,335
Asset retirement obligation	367
Pro forma long-term liabilities, less current portion	\$ 1,702

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# LEADERSHIP

ANTIGENICS SENIOR MANAGEMENT



LEFT TO RIGHT

Sunny Uberoi, *Vice President, Corporate Communications* • John Cerio, *Vice President, Human Resources* • Jeff D. Clark, *Chief Financial Officer* • Doris Peterkin, *Vice President, Market Development* • Deanna Petersen, *Vice President, Business Development* • Neal F. Gordon, PhD, *Senior Vice President, Manufacturing Operations* • Renu Gupta, MD, *Senior Vice President, Development* • Alem Truneh, PhD, *Vice President, Research and Development* • Russell H. Herndon, *President, Commercial Operations*

Our mission is to develop and commercialize therapeutics that selectively harness the immune system to enhance and extend the lives of patients with serious, unmet medical needs. We attract individuals of exceptional talent, develop them to their fullest potential, and retain them in a team-oriented, high-performance work environment. Through our efforts, we will improve lives and maximize value to our shareholders.



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## DIRECTORS AND BOARDS

### DIRECTORS

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Chairman and CEO  
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Executive Scientist  
Dr. S. S. Chakraborty  
Vice Chairman

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Managing Ventures

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Dr. P. Deshaene  
Dr. S. S. Chakraborty  
Dr. J. E. Dixon

Dr. J. Jordan  
Dr. K. Kessel  
Dr. M. A. Lee

Dr. S. S. Chakraborty  
Dr. J. E. Dixon  
Dr. J. Jordan

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Boston, MA 02110

INDEPENDENT AUDITORS  
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150 John F. Kennedy Parkway  
Short Hills, NJ 07078

### ANNUAL MEETING

The annual shareholders meeting will be held at 5:00 pm EDT on Wednesday, May 26, 2004, at The Three West Club, 3 West 51st Street, New York City. Detailed information about the meeting is contained in the Notice of Annual Meeting and Proxy Statement.

If you need additional assistance or information regarding the company, or would like to receive a free copy of Antigenics Form 10-K and 10-Q reports filed with the Securities and Exchange Commission, contact the Investor Relations Department at 800.962.AGEN or send an e-mail to [ir@antigenics.com](mailto:ir@antigenics.com).

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Antigenics Corporate Communications  
Original Photography  
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Bowne of Boston

This annual report contains forward-looking statements, including statements regarding our ability to commercialize our product candidates, that our current and future product candidates will achieve results from prior preclinical and/or clinical studies. Antigenics expects advantages over other platinum chemotherapy agents, the success of our product candidates will eventually address the timing of planned clinical and preclinical trials, regulatory filings and actions, facilities expansion, and the timing of our product candidates. These statements are subject to risks and uncertainties that could cause actual results to differ materially from those projected in our forward-looking statements. These risks and uncertainties include, among others, that we may not be able to enroll sufficient numbers of patients in our clinical trials; our clinical trials may be slower than we expect; our clinical trials may not demonstrate that our products are both safe and more effective than current products; we may be unable to obtain the regulatory approvals necessary to conduct additional clinical trials or to market products; we may fail to adequately protect our intellectual property or are determined to infringe on the intellectual property of others; and factors described in the company's periodic filings with the Securities and Exchange Commission. Please see the disclosure under the heading "Factors That May Impact Future Results" in the Management's Discussion and Analysis of Financial Condition and Results of Operations section of the Antigenics Annual Report on Form 10-K for the year ending December 31, 2003, for a more complete discussion of these and other risk factors. Antigenics cautions investors against placing undue reliance on the forward-looking statements contained in this document. These statements speak only as of the date of this document, and Antigenics makes no obligation to update or revise the statements. All forward-looking statements are made as of the date of this document. Antigenics disclaims any liability for any loss or damage caused by reliance on these statements. All forward-looking statements are made as of the date of this document. Antigenics disclaims any liability for any loss or damage caused by reliance on these statements. All forward-looking statements are made as of the date of this document. Antigenics disclaims any liability for any loss or damage caused by reliance on these statements.

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